



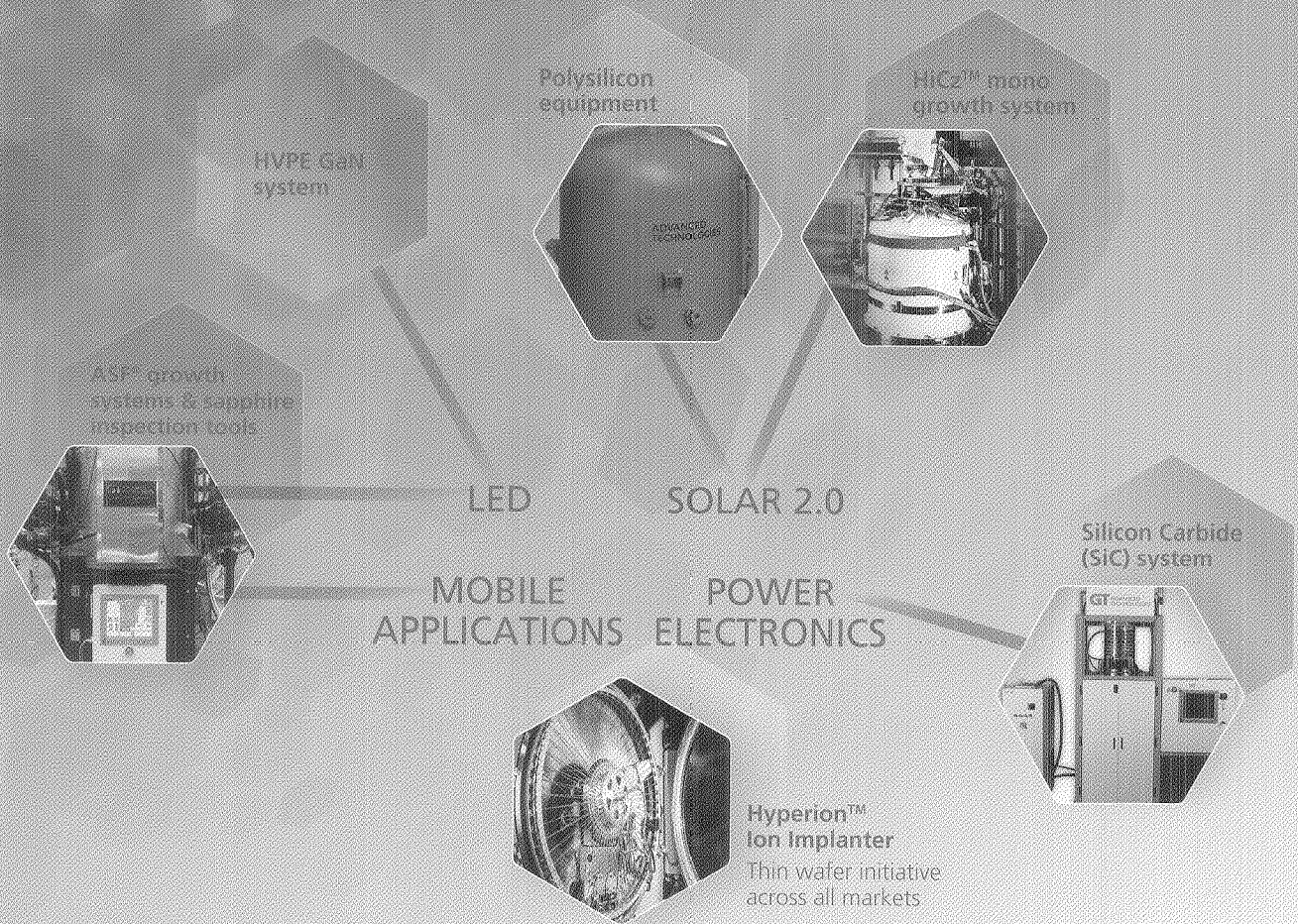
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Growth Built on a  
Diversified Foundation

2012 Annual Report



Diversifying our business with an expanding foundation of technologies that help **build industries.**



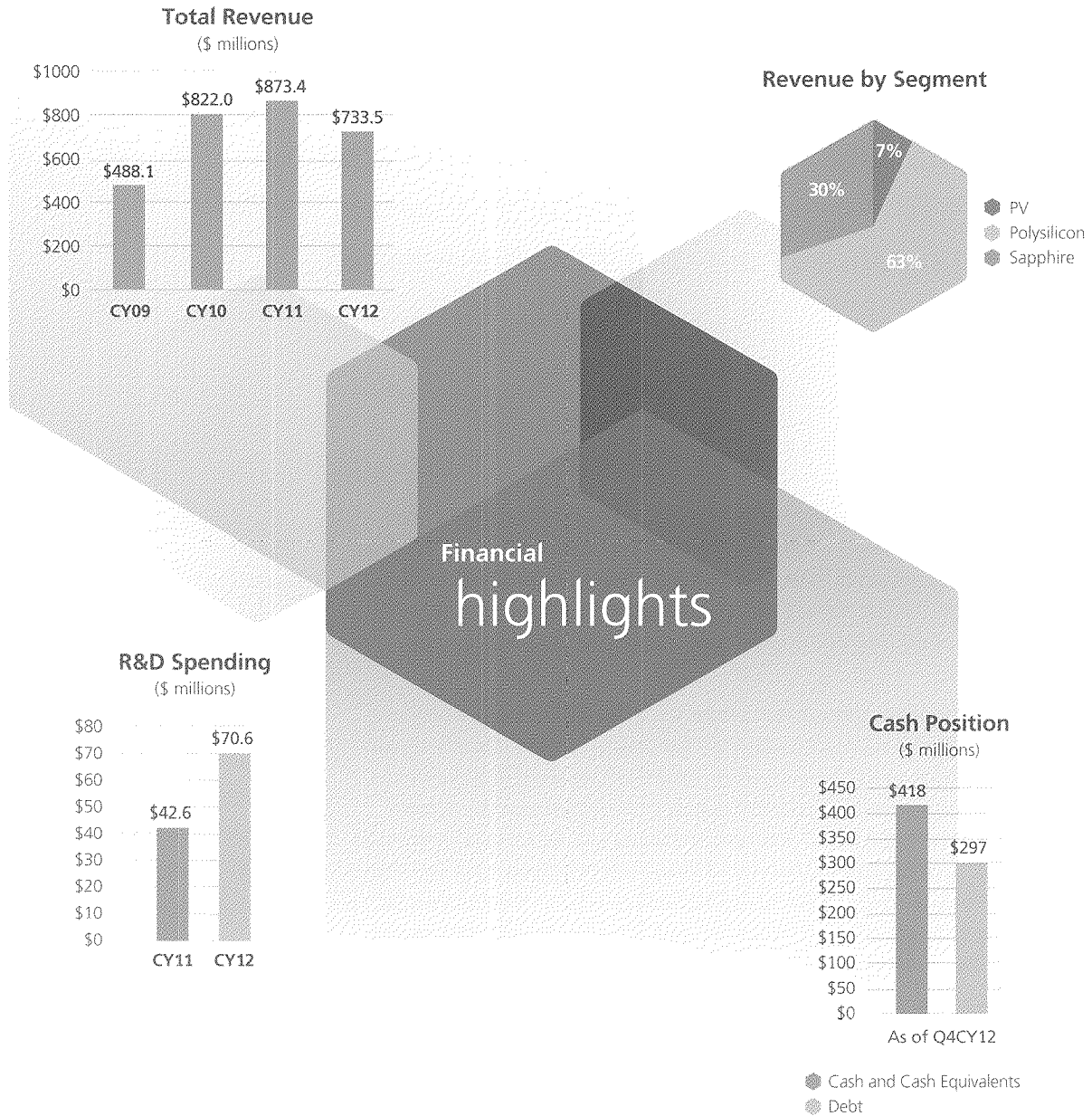
GT Advanced Technologies is a diversified technology leader providing innovative crystal growth equipment and solutions for the solar, LED and electronics industries. Our industry-leading technologies allow our customers to lower the cost of manufacturing high-quality advanced materials. Our expanding foundation of products is helping to build new industries that accelerate the adoption of energy-saving technologies for a greener world.

Our growing base of new technologies include our HiCz™ monocrystalline growth systems, silicon carbide (SiC) sublimation furnaces, HVPE gallium nitride (GaN) systems and Hyperion™ implant technology, which when fully developed, are expected to deliver new levels of performance and cost reduction for next generation solar, power electronics and LED applications.

Lastly, we are also very excited about the emerging opportunities for our sapphire business in the high-growth consumer electronics markets for cover and touch-screen mobile applications.

## A year in review

In CY12, 30% of the year's revenue was from the sapphire business as we continued to execute on the strategy of diversifying beyond our original core solar business. We also continued to fund important programs that will drive our future growth, reflected in the approximately 65% increase in R&D.



Calendar year 2012 was a year that demonstrated the resilience of GT Advanced Technologies' business model and the importance of our diversification strategy.

Soft demand and overcapacity in our two served markets, solar and sapphire, persisted throughout the year, resulting in revenues of \$733.5 million, compared with \$873.4 million in calendar year 2011. In the face of the industry headwinds, we outperformed our industry peers, we continued to diversify the business, and we took decisive and prudent steps to protect ourselves during the downturn.

More than 30% of the year's revenue came from our sapphire business, which we launched in 2011 with the successful acquisition of Crystal Systems. Only two years ago, solar accounted for 100% of our business. While soft demand and customers' limited access to capital slowed the pace of our sapphire business in the second half of 2012, we expect that the LED and sapphire sector will return to growth in the second half of 2013. We believe LED market demand will improve in that time frame, our largest customers will gain access to capital, and our efforts to lower the cost of manufacturing and expand applications for our ASF® sapphire growth furnaces beyond the LED sector will begin to bear fruit.

Our polysilicon business was a solid contributor to the business in 2012, representing over 62% of the year's revenue – a reflection of our customers' commitment to improve their competitive position with GT's best-in-class polysilicon technology. Our visibility in this segment remains excellent and we believe our polysilicon backlog, which is mostly with top tier customers, will provide us with a stable source of revenue as it rolls off over the next several years.

Our PV business contributed very modestly to the year, accounting for approximately 7% of the year's revenue – a reflection of the solar industry's current state of overcapacity, the liquidity issues that many PV customers have faced and the ongoing international

Our polysilicon business was a solid contributor to the business in 2012, representing over 62% of the year's revenue – a reflection of our customers' commitment to improve their competitive position with GT's best-in-class polysilicon technology.





We believe the execution of our diversification strategy, coupled with the steps we are taking to strengthen our position in the core markets we already serve, and the prudent steps we have taken to protect the business, will provide the company with a path to resumed growth, cash generation and value creation for our customers and our shareholders in the years ahead.

trade tensions in the sector. Looking forward, we continue to believe that the adoption of more efficient solar technologies that will lower total system costs is inevitable. We are excited about the future prospects for our next-generation HiCz™ monocrystalline technology, which we believe will address the industry's need for more efficient, lower cost solar material and will help drive a return to growth for our PV business in 2014.

In response to sustained softness in our served markets, we took several steps to restructure the company and manage our balance sheet. We reduced our overall workforce by approximately 25%; we idled our St. Louis HiCz pilot manufacturing facility; and we completed a convertible debt offering with net proceeds of \$196 million. In addition, we are reducing our capital spending by over 60% in 2013 and limiting our future M&A activities to deals that consume minimal cash. Collectively, these actions have improved our strategic and financial positions, and will enable us to continue investing in the programs that will fuel our eventual recovery and return to growth.

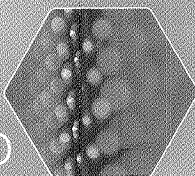
On that note, we grew our R&D investment in 2012 by approximately 65% over 2011 levels, during a time when many peers retrenched from investing in their future. This reflects our continued funding of several important growth and diversification programs such as the development of our HiCz technology.

In addition, we are actively working to develop new market opportunities for sapphire in the consumer electronics market, including smartphone and point-of-sale

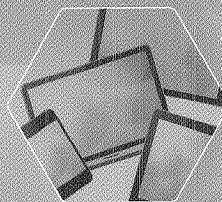
## Expanding the Market Opportunities for Sapphire

We are excited about the emerging opportunities for ASF sapphire in new applications and believe these have the potential to start contributing to our business in the second half of 2013.

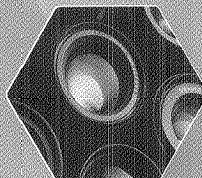
LED



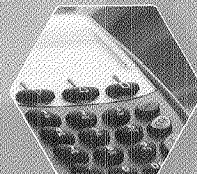
Smartphones and tablets



Camera covers



Point-of-sale devices



applications. We are excited about the emerging opportunities for ASF sapphire in these applications and believe these have the potential to start contributing to our business in the second half of 2013. Our recently announced partnership with Intego to develop automated sapphire inspection tools will further enable the use of sapphire in high-volume applications by improving yields, lowering costs and providing objective, repeatable and traceable inspections.

We are also expanding our business with several other new initiatives targeted at growing markets, including:

- **Our Silicon Carbide (SiC) systems directed at the power electronics market, a high growth market where there are currently no capable suppliers of merchant SiC furnaces. We will be bringing our SiC solution to market in 2013.**
- **Our HVPE gallium nitride (GaN) technology, which will be directed at the growing LED market and also has potential application in power electronics.**

- **Our Hyperion™ R&D initiative, which could have application in several markets including solar, SiC and sapphire.**

As a result of these efforts, we are continuing to evolve into a very well-diversified technology company participating in several, growing end markets. We believe GT's core strengths will be instrumental in providing the foundation to succeed in these efforts. This includes our proven track record of delivering innovative crystallization technologies that provide the critical value and cost improvements that industries need to grow and thrive; our lean, responsive, and flexible business structure; our proven ability to manage the business through challenging market conditions; and our unique approach to enabling and developing new markets by operating as a strategic equipment partner to our customers. This is a proven approach taken by GT in both the polysilicon and sapphire industries, where we have helped create new industry leaders and improved the cost structures of established players, and an approach that we are positioned to take as we enter these new markets.

We believe the execution of our diversification strategy, coupled with the steps we are taking to strengthen our position in the core markets we already serve, and the prudent steps we have taken to protect the business, will provide the company with a path to resumed growth, cash generation and value creation for our customers and our shareholders in the years ahead.

I want to thank our customers, supply partners and shareholders for their ongoing support and belief in our business. Lastly, I want to say how proud I am of GT's talented and dedicated employees. As I look forward, I am both honored and excited to lead GT at this pivotal time in its history.

Tom Gutierrez  
President and Chief Executive Officer

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended  
or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from April 1, 2012 to December 31, 2012

Commission file number: 001-34133

**GT Advanced Technologies Inc.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

03-0606749  
(I.R.S. Employer  
Identification No.)

20 Trafalgar Square  
Nashua, New Hampshire 03063  
(Address of principal executive offices, including zip code)

(603) 883-5200

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the act:

Title of each class

Name of each exchange on which registered

Common Stock, \$0.01 par value

The NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes  No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a  
smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the registrant's common stock, \$0.01 par value per share, held by non-affiliates of the registrant on June 30, 2012, the last business day of the registrant's second fiscal quarter (taking into account the Company's change in fiscal year end), was approximately \$622.5 million (based on the closing sales price of the registrant's common stock on June 30, 2012). As of February 22, 2013, 119,338,954 shares of the registrant's common stock, \$0.01 par value per share, were issued and outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

The information required by Part III of this Transition Report on Form 10-K, to the extent not set forth herein, is incorporated by reference from the registrant's definitive proxy statement relating to the Annual Meeting of Shareholders to be held in 2013, which will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Transition Report on Form 10-K relates.

**SEC**  
**Mail Processing**  
**Section**  
**APR 26 2013**  
**Washington DC**  
**400**



**GT ADVANCED TECHNOLOGIES INC.**

**Form 10-K**

**Year Ended December 31, 2012**

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### Cautionary Statements Concerning Forward-Looking Statements

*This Transition Report on Form 10-K contains “forward-looking statements” that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. The statements contained in this Transition Report on Form 10-K that are not purely historical are “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are identified by the use of words such as, but not limited to, “anticipate,” “believe,” “continue,” “could,” “estimate,” “prospects,” “forecasts,” “expect,” “intend,” “may,” “will,” “plan,” “target,” and similar expressions or variations intended to identify forward-looking statements and include statements about our expectations of future periods with respect to, among other things:*

- the HiCz equipment offering will be commercially available during 2014;*
- the Hyperion™ ion implanter tool and applications will not be commercially available until after the HiCz™ equipment offering is commercialized;*
- the Company does not expect to sell any HiCz™ material in the future;*
- Trade friction will continue to have a negative impact on the PV industry and exacerbates the declining demand that the industry has experienced for PV products;*
- Company expects to be in compliance with the covenants under its credit facility with Bank of America N.A. and other lenders;*
- the global solar PV industry will not experience growth in 2013;*
- Company expects to introduce a DSS upgrade in 2013 (and the performance characteristics of this upgrade);*
- limited investment for additional generation PV capital equipment is expected in 2013 and beyond;*
- there will be limited sales of new DSS systems to PV manufacturers and, to the extent Company make sales, the prices for which we sell DSS equipment will be significantly below those historically have charged to customers;*
- Company intends to discontinue any significant additional investments in our DSS product line;*
- Company will attempt to sell any DSS furnaces in inventory, but expect that demand for these will be limited;*
- the recovery of the solar industry, will be driven by next-generation technology adoption that is aimed at producing lower cost, higher efficiency monocrystalline wafers and cells;*
- Hyperion ion implanter tool could reduce cost of PV manufacturing;*
- all information regarding future product releases (including HiCz, Hyperion ion implanted, silicon carbide equipment and the performance metrics of those tools);*
- there will be future advancements in the PV industry;*
- the growth strategies for all three of the Company’s business segments;*
- future polysilicon product (for breaking polysilicon) will have applicability in a number of polysilicon crystallization techniques;*
- demand for large area sapphire material is expected to grow;*
- Company expects to pursue the development of thin sapphire laminates for use in applications such as cover and touch screen devices;*
- Company intends to continue to develop its ASF system in order to provide enhancements in productivity and cost of ownership;*
- Company’s relationship with Asia-based companies and the Company’s base of operations will enhance competitiveness in the sapphire equipment industry;*

- *Sales to customers in Asia will continue to be a significant portion of total sales over the next several years as Company will continue to focus polysilicon, PV and sapphire equipment sales efforts in that region;*
- *Company expects that most customers will substantially perform on their contractual obligations (but expects that some customers will not);*
- *the Company's future bookings may be even less in the next twelve months (than the transition period ended December 31, 2012) and this will continue to have an adverse impact on the business;*
- *Because of the high level of PV manufacturing overcapacity, Company expects very limited investment in additional generation capital equipment for 2013 and beyond;*
- *Company expects to have no meaningful sales or revenue from PV segment in 2013;*
- *Company expects demand for its products among its Asian customers will be limited for the short-term;*
- *Company will not take certain inventory for which it had previously made down payments to vendors;*
- *Company expects to terminate purchase commitments for DSS inventory components in fiscal 2013 and beyond and will negotiate with vendors to determine the amount payable upon termination;*
- *Company's success in the PV market will depend upon success in commercializing the HiCz™ equipment offering;*
- *Company expects that dependence on a limited number of customers will continue;*
- *increasing governmental budgetary pressures will likely result in reduced, or the elimination of, government subsidies and economic incentives for on-grid solar electricity applications;*
- *Company expects a further reduction in demand and decreased average selling prices for our DSS multicrystalline furnace, if it is able to sell any additional DSS furnaces at all;*
- *HiCz offering will target improved ingot efficiencies compared to that of multicrystalline silicon materials;*
- *Company expects to recognize revenue from customers in Europe and Asia in the future;*
- *anticipated decrease, and subsequent elimination of, governmental incentives for renewable energy usage (and the reasons therefore), including solar energy and PV installations, and that the loss of these incentives may hamper the growth of the solar industry (and reduce demand for PV equipment);*
- *Company expects a large percentage of future revenue will continue to be derived from sales to customers outside the U.S.;*
- *Company expects quarterly results will continue to fluctuate;*
- *Company does not anticipate paying dividends in the foreseeable future;*
- *The information identified under the heading "Factors Affecting the Results of Our Operations;"*
- *Expectation that that it is more-likely-than-not that results of future operations will generate sufficient taxable income to allow Company to realize our deferred tax assets;*
- *The polysilicon and sapphire businesses will account for a majority of revenue for the calendar year ending December 31, 2013;*
- *No one customer will account for more than 25% of our total annual revenue for the year ending December 31, 2013;*
- *Company expects to continue to invest in new research and development projects and attempt to expand certain existing product bases and introduce new products;*
- *Hazelwood facility idling is expected to be completed on or before March 31, 2013 (with no additional material charges related to this idling);*



- *Expected completion date and amounts of payments in connection with idling the Hazelwood facility;*
- *Company expects that the challenging market environment it faced will continue in 2013 and much of the Company's business for calendar year 2013 is expected to result from filling orders in backlog and do not expect any meaningful revenue from new contracts during 2013;*
- *Expected use of cash in the future (including with respect to cash held by foreign subsidiaries);*
- *Company has sufficient cash to fund operations for the next twelve months (even if Company was required to re-pay all amounts due under its Credit Facility with Bank of America N.A.);*
- *Anticipated future capital expenditures in 2013;*
- *the HiCz equipment offering is expected to lower the cost of monocrystalline ingot technology and produce high efficiency monocrystalline solar ingots, both of which are expected to make it more competitive with wafers produced using the traditional batch Cz technology;*
- *the Company's relationships with leading Chinese companies and expanded base of operations in China will enhance our ability to compete against the lower cost Chinese capital equipment companies in each of our served markets;*
- *our goal to lower the cost of producing high quality polysilicon for our customers by providing more efficient plant designs and increasing the throughput and efficiency of each new generation of our SDR reactors;*
- *positioned to successfully compete for future market expansions in polysilicon;*
- *timing of delivery of our equipment products;*
- *expected conversion of backlog into revenue;*
- *oversupply or decreased demand in the end-markets served by our equipment customers will have an adverse impact on our business (and may require we sell equipment at prices below our historical price);*
- *the Company expects to make acquisitions of businesses or technologies that will result in the diversification of our business (but intends to continue principally as an equipment supplier) and the impact of such diversification;*
- *likelihood of customers going to other equipment suppliers is increasing;*
- *Company expects to grow our business;*
- *we will maintain cash held by foreign subsidiaries outside of the U.S. (and the intended use of these funds);*
- *total capital expenditures in the twelve month period ending December 31, 2013 (and the uses thereof); and*
- *Material amounts not expected to be paid by Company under indemnification provisions.*

*These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, factors discussed in Part I, Item 1A "Risk Factors" and included elsewhere in this Transition Report on Form 10-K.*

*Forward-looking statements speak only as of the date of this Transition Report on Form 10-K (or other date as specified in this Transition Report on Form 10-K) or, as of the date given if provided in another filing with the SEC. We undertake no obligation, and disclaim any obligation, to publicly update or review any forward-looking statements to reflect events or circumstances after the date of such statements.*

## PART I

### Item 1. *Business*

#### **Our Company**

GT Advanced Technologies is a diversified technology company with innovative crystal growth equipment and solutions for the global solar, LED and electronics industries. Our products are designed to accelerate the adoption of advanced materials that improve performance and lower the cost of manufacturing. References herein to “we,” “us,” “our” and “Company” are to GT Advanced Technologies Inc., operating through its subsidiaries.

Our principal products are:

- Silicon Deposition Reactors (SDR™) and related equipment used to produce polysilicon, the key raw material used in silicon-based solar wafers and cells;
- Advanced sapphire crystallization furnaces (ASF®) which are used to crystallize sapphire boules. These sapphire boules are used to make sapphire wafers, a substrate for manufacturing light emitting diodes (LEDs), as well as sapphire blanks and windows for such applications as medical devices and watch crystals; and
- Directional solidification (DSS™) furnaces and related equipment used to cast multicrystalline and MonoCast™ crystalline silicon ingots. These ingots are used to make photovoltaic (PV) solar wafers and cells.

We also produce sapphire material at our pilot production facility in Massachusetts which is sold directly to customers and used to make a variety of products such as epitaxial-ready wafers for use in the LED and other specialty markets.

GT Advanced Technologies Inc. was originally incorporated as GT Solar International, Inc. in Delaware in September 2006, and in July 2008, we completed our initial public offering. In August 2011, we changed the name of the Company to GT Advanced Technologies Inc., and such change was effected pursuant to Section 253 of the Delaware General Corporation Law of the State of Delaware by the merger of a wholly-owned subsidiary of the Company into the Company. At the same time, we changed our NASDAQ stock ticker symbol to GTAT.

#### ***Recent Business and Technology Acquisitions***

On August 24, 2011, we acquired privately-held Confluence Solar, Inc., a crystal growth company developing a continuously-fed Czochralski (HiCz™) growth technology designed to enable the production of high efficiency monocrystalline solar cells. On November 14, 2012, we acquired certain select capital assets and intellectual property of Twin Creeks Technologies, Inc., related to Hyperion ion implanter technology, such technology is intended to enable the production of thin substrates. Both the HiCz equipment tool and the Hyperion tool are still under development. We expect to make the HiCz™ equipment tool available in 2014 and the Hyperion ion implanter tool and applications at a subsequent date since it is still in the early stages of development.

#### ***Idling of Facility***

On January 7, 2013, we announced the idling of our HiCz™ pilot manufacturing facility in Hazelwood, Missouri. We are transitioning our HiCz research and development to our Merrimack, New Hampshire facility. We did sell, on a limited basis, HiCz™ materials generated with the equipment located at the Hazelwood facility. In connection with idling this facility, we do not intend to sell any HiCz™ material to customers for the immediate future.

## ***Business Segments***

We operate the Company as one business unit comprised of our three business segments: our polysilicon business, our photovoltaic, or PV, business and our sapphire business.

## **Our Business Focus**

The primary market for our product development has been the solar industry where we have established a leadership position in two areas; products and services that enable the production of low-cost, high quality polysilicon, and silicon casting furnaces that produce crystalline ingots used in the production of solar cells. With the acquisition of Crystal Systems in 2010, we entered into the sapphire material and equipment industry, with a focus on providing sapphire furnaces for global LED and other specialty markets.

## **PV Industry Overview**

Photovoltaic (PV) systems are used in industrial, commercial and residential applications to convert sunlight directly into electricity. Except for those few locations in the world where costs of traditional sources of energy are very high, electricity generated from solar PV energy is more expensive than electricity generated by traditional energy sources, although the difference is decreasing as solar PV manufacturing becomes less costly and solar cells become more efficient in converting sunlight into electricity.

Throughout 2012, the global solar industry continued to experience a significant downturn that has negatively impacted the growth of the industry and the profitability of PV producers and the companies who supply the equipment and materials used in the production of PV products such as wafers, cells and solar modules. PV installations in calendar 2012 accounted for an aggregate of 31.9 gigawatts output (as estimated by an independent third party research firm), a 16% increase over 2011 compared with a 40% increase in gigawatt output from 2010 to 2011.

Currently, the combined global installed manufacturing capacity to produce modules exceeds demand for PV modules. As a result, PV module and polysilicon prices have fallen to historic lows. According to an independent third party research firm, module prices fell from an estimated \$1.56 in the fourth quarter of 2011 to an estimated \$1.10 per watt in the fourth quarter of 2012. Average quarterly prices for multicrystalline wafers fell from \$0.41 per watt at the beginning of 2012 to \$0.23 per watt by December 2012. According to this research firm, spot prices for polysilicon fell from \$36.00 per kilogram at the beginning of 2012 to \$17.00 per kilogram by December 2012, a 53% decline. Contract prices for polysilicon also declined from \$43.00 per kilogram at the beginning of 2012 to \$24.00 per kilogram at the end of 2012, a 44% decrease.

The impact of these decreasing prices on PV manufacturers and equipment suppliers resulted in lower factory utilization rates and lower equipment sales compared to 2011. As a result of these dynamics, companies in the solar PV value chain are experiencing revenue declines.

Also, during 2012, the beginnings of a trade conflict for certain solar products erupted with respect to import of solar cells and modules from China into the United States and import of polysilicon from the United States and South Korea into China (among other disputes). Most recently, in October 2012, the U.S. Commerce Department issued a final ruling and levied anti-dumping duties ranging from 18.32% to 249.96% on billions of dollars of solar panels and cells from China (and set countervailing duties from 14.78% to 15.97%). This follows a May 2012 Department of Commerce announcement of a preliminary determination that China had violated fair trade policies by “dumping” into the U.S. certain solar products at prices that were intended to advantage Chinese manufacturers. The Chinese government responded by saying these actions were deliberately provoking trade friction between the two nations. In addition, the European Union has commenced an investigation into whether Chinese solar equipment manufacturers have dumped equipment into the E.U. in violation of trade regulations.



If the E.U. imposes duties in connection with this investigation, it could harm our business since many of our Chinese customers sell into the E.U. In response, in 2012, the Chinese Ministry of Commerce opened investigations on imports of solar-grade polysilicon from the U.S., South Korea and the European Union that may result in trade duties on polysilicon imports from polysilicon manufacturers in these regions.

Over the past several years, government incentive programs such as feed-in-tariffs (or FITs), most notably in Germany, have encouraged the growth of PV installations. Governmental support for continued financial incentive programs, however, is waning and incentive programs are being reduced or in some cases eliminated particularly in established solar markets like Germany and Italy. Further reduction in governmental incentive programs or the elimination of these incentive programs may hamper the development of the solar industry resulting in reduced demand for PV equipment.

All of these factors have led us to conclude that the global solar PV industry will not experience growth in 2013.

### **Our PV Business**

The focus of our PV business is the development, manufacture and sales of crystallization growth furnaces to produce silicon ingots used in the production of solar wafers. Our principal product line has been the DSS family of casting furnaces that are used to produce multicrystalline ingots and MonoCast™ ingots, the latter having a higher percentage of monocrystalline material and being, therefore, more efficient. We introduced the first DSS furnace, the DSS™240, in 2003. Since that time we believe we have established a leading market position with our DSS systems for the production of multicrystalline solar wafers. From April 1, 2003 through December 31, 2012, we shipped approximately 3,300 DSS crystallization furnaces.

In 2013, we expect to introduce our final DSS multicrystalline upgrade, which allows DSS customers to increase the capacity of their current DSS™450 and 650 furnaces to levels of production of approximately 850 kilograms, thereby lowering overall wafer costs.

Because of the high level of PV manufacturing overcapacity, we expect very limited investment in additional generation capital equipment for 2013 and beyond. This will impact our DSS furnace business as we believe there will be limited sales of new DSS systems to PV manufacturers and, to the extent we make sales, the prices for which we sell DSS equipment will be significantly below those we historically have charged our customers. As such, following the release of the upgrade, we intend to discontinue any significant additional investments in our DSS product line. We will endeavor to sell any DSS furnaces that we have in our inventory, but expect that demand for these will be limited. As the industry begins transitioning to next generation silicon growth equipment, we will continue to support our DSS customers as we have in the past to ensure their equipment continues operating efficiently for as long as they choose to operate their equipment.

We believe that the recovery of the solar industry, will be driven by next-generation technology adoption that is aimed at producing lower cost, higher efficiency monocrystalline wafers and cells. In an effort to respond to this expected change in the industry, we have shifted research and development efforts to next generation silicon crystal growth equipment such as our HiCz™ system, a technology we acquired through our acquisition of Confluence Solar in 2011.

HiCz™, or continuous Czochralski (Cz) growth process, produces monocrystalline ingots that are designed to produce more efficient wafers than those made from traditional batch Cz ingots. We are still in the process of developing a HiCz™ equipment offering and do not expect to commence commercial sales in 2013.

Our acquisition of the Hyperion™ ion implantation assets in November 2012 provides us with another technology that, when developed, could reduce the cost of PV manufacturing even further. Hyperion is an ion implanter technology that exfoliates or “lifts” a very thin wafer off of a base of

monocrystalline material. GT is currently developing an equipment offering based on the Hyperion technology but this equipment will not be commercially available in 2013.

**Our primary PV products include:**

*DSS Multicrystalline casting furnaces*—Our DSS furnace is a specialized furnace used to melt polysilicon and cast multicrystalline ingots. Multicrystalline ingots are used to produce solar wafers, which ultimately become solar cells. We currently market our DSS crystallization furnaces under the names DSS450HP and DSS650. Our largest capacity DSS furnace, the DSS650, is capable of producing ingots that weigh up to 650 kilograms using standard silicon feedstock. We will attempt to sell the DSS furnaces in our inventory, and will continue to support DSS equipment operating at our customers' facilities, but we intend to discontinue making further improvements or upgrades in this product line.

*DSS MonoCast casting furnaces*—In January 2012, we commercially introduced our MonoCast™ silicon casting technology that uses the DSS furnace architecture to produce ingots comprised of a high percentage of monocrystalline material. Solar cells produced from MonoCast wafers have been shown to deliver higher efficiencies than cells made from traditional multicrystalline wafers. Currently, we are marketing MonoCast technology under the name DSS™450 MonoCast™. As with the DSS multicrystalline furnace, we will continue to support MonoCast equipment operating at our customers' facilities, but we intend to discontinue further making improvements or upgrades in this product line.

All of the components and assemblies for our DSS furnaces are manufactured by third parties using our designs. Our manufacturing personnel focus on final assembly, integration and testing of the DSS furnace. We also provide engineering and product design, quality control, process engineering and engineering services related to the operation of our DSS furnaces.

*Ancillary equipment*—Our ancillary equipment provides operators with material handling assistance during the preparation of the crucible before it is loaded with silicon and during the loading and unloading of the crucible into the DSS furnace chamber at the start of the growth process and out of the DSS furnace chamber at the conclusion of the ingot growth process. Our ancillary equipment includes crucible coating stations, crucible manipulators, loaders/unloaders, extraction tools and other material handling systems required to safely transport material during the ingot growth process.

In 2011, we introduced Acuity™ performance software, a DSS furnace performance monitoring software product that is designed to allow production managers to improve the performance of their DSS crystal growth furnaces.

*Photovoltaic parts and services*—The use of our products requires substantial technical know-how and many of our customers rely on us to design and optimize their production processes as well as train their employees in the use of our equipment. We sell replacement parts and consumables used in our DSS furnaces and other PV equipment. We typically charge for these services and parts separately from the price of our equipment.

We will continue to offer ancillary equipment and PV parts and services to support existing DSS customers.

**Future PV product releases**

*Monocrystalline furnaces*—We entered the monocrystalline silicon business with the acquisition of Confluence Solar on August 24, 2011. Confluence Solar used a continuous monocrystalline growth technology based on the Czochralski, or Cz, crystal growth method. Cz furnaces “pull” an ingot out of a molten crucible of silicon in a controlled process which is designed to produce a long and uniformly cylindrical ingot. We refer to our continuous CZ growth process as HiCz™. Solar cells made from monocrystalline wafers typically have higher solar conversion efficiencies than multicrystalline wafers. The HiCz growth process will be available, we expect, during 2014.

*Hyperion™ ion implanter*—We are currently developing the Hyperion ion implanter technology that exfoliates a very thin wafer off of a base of monocrystalline material.

### **PV Business Competitive Strengths**

We believe that our competitive strengths include:

- Key equipment supplier to many of the world's leading solar companies—We have been providing manufacturing equipment to the solar industry for over a decade and have supplied equipment to many of the world's leading polysilicon, solar wafer, cell and module manufacturers, including LDK Solar Co., Ltd., (or LDK), Nexolon Co., Ltd., Green Energy Technology, Baoding Tianwei Yingli New Energy Resources Co., Ltd. (or Yingli), Changzhou Trina Solar Energy Co., Ltd. (or Trina) AG, and GCL Poly Energy Holdings Limited.
- Large business presence in key PV manufacturing regions—Today, many of the world's leading solar manufacturing companies are based in China, which according to an independent third party research firm, accounted for approximately 77% of the world's solar wafer manufacturing capacity in 2012. We have been doing business in China since 2002 and have shifted our global operations to Asia, where the majority of our customers are located. We believe that our relationships with leading Asia-based solar companies and having our base of operations in the region enhances our ability to compete against the lower cost Chinese PV capital equipment companies in our served markets.
- Leading market position in crystal growth equipment for the solar industry—We believe our DSS crystallization furnaces are the most widely used furnaces for casting multicrystalline ingots in the solar industry. Since the introduction of our DSS240 in 2003, we have shipped approximately 3,300 furnaces to customers worldwide, the majority of which were to manufacturers in China. We believe our large base of customers and our ability to support their manufacturing operations with our service personnel positions us for the anticipated advancements in the PV industry.
- Rapid commercialization of new technology to enable the growth of new markets—We have been successful in commercializing crystal growth technology that enables new entrants to capitalize on expected market growth opportunities. We established a leading multicrystalline growth technology in the PV industry with our DSS furnace in 2003. We are developing our HiCz monocrystalline silicon growth technology that is designed to produce higher quality and lower cost wafers needed for the production of higher efficiency solar cells.
- Outsourced manufacturing model—Our manufacturing model is different from many capital equipment companies in that we outsource the manufacturing of the components used in our PV equipment. All of the components of our DSS crystallization furnaces are shipped to our Hong Kong consolidation warehouse where they are crated for ultimate shipment to customers. This model results in a highly flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees.

### **PV Business Growth Strategies**

Our PV growth strategies include:

- maintaining technology leadership in our PV product line through continued innovation and new product development that preserves our market share and lowers our customers' cost of manufacturing and improves the quality of the material produced in our furnaces;
- developing or acquiring complementary technologies or businesses that strengthen and leverage our crystal growth expertise, as evidenced our investment in and on-going development of our HiCz™ and Hyperion™ technology; and



- better serving our customers and lowering our costs by maintaining our base of operations in Asia.

### **PV Business Competition**

We compete on the basis of technology, delivery, service (both installation and aftermarket) and price. We principally compete with both well established and new, low-cost equipment manufacturers, primarily located in China, for DSS furnaces for the production of multicrystalline ingots. These competitors include ALD Vacuum Technologies AG, JYT Corporation, Ferrotec Corporation, PVA TePla AG, Centrotherm Elektrische Anlagen GmbH & Co., Jing Gong Technology, Zhejiang Jingsheng Mechanical & Electrical Co., Ltd., as well as a number of other furnace manufacturers. Several of these competitors, such as Centrotherm and Ferrotec, are large integrated manufacturers with significant resources capable of competing for business globally. We believe we compete favorably based on the reliability of our technology, our strong service and support capabilities and the cost of ownership of our equipment.

In addition, we experience competition from new entrants, many of whom have significant resources and advanced technology, as well as competition from certain companies who formerly purchased materials from our DSS equipment customers and have decided to manufacture their own silicon ingots by means of creating and building their own equipment.

### ***Our Polysilicon Business***

Polysilicon is a purified form of silicon that is a key raw material used to produce photovoltaic and semiconductor wafers. Our polysilicon business offers Silicon Deposition Reactors, which utilize the chemical vapor deposition process, and related TCS technology and equipment along with engineering services to existing polysilicon producers and new market entrants.

Our polysilicon business focuses on product design, quality control, engineering services, project management and process development related to the production of polysilicon. One of our goals is to lower the cost of producing high quality polysilicon for our customers by providing more efficient plant designs and increasing the throughput and efficiency of each new generation of our SDR reactors.

### **Our primary Polysilicon products:**

*SDR Reactor*—We began offering SDR reactors commercially in April 2006. Our SDR reactors have demonstrated production at levels greater than their nameplate capacity. We market our SDR reactors under the names SDR300, SDR400, SDR 500 and SDR 600.

*Hydrochlorination for the production of TCS and Silane*—We provide equipment, technology and engineering services for the production and purification of trichlorosilane (TCS) and silane. This hydrochlorination technology eliminates the need for silicon tetrachloride converters which are required when using certain other polysilicon production technology. In 2008, we began offering hydrochlorination technology which is designed to ultimately lower the capital costs and power consumption of polysilicon production.

*Polysilicon services, parts and other*—We also provide engineering services for the commissioning, start-up and optimization of our equipment and technology. We typically charge for these services and parts separately from the price of our polysilicon equipment.

We also provide ancillary equipment and technologies for producing seed rods used in our SDR reactors and for handling and processing the polysilicon rods into a finished product. In addition, we are developing a technology that is designed to break up larger polysilicon pieces in precisely-sized nuggets. When fully commercialized this technology is expected to have applicability in a number of polysilicon crystallization techniques.

## **Polysilicon Business Competitive Strengths**

We believe that our competitive strengths include:

- Key equipment supplier to many of the world's leading polysilicon companies—We have been providing polysilicon production equipment since 2007 and have supplied equipment to many of the world's leading polysilicon manufacturers, including OCI Company, Ltd, Samsung MEMC Polysilicon (SMP), and GCL-Poly Energy Holdings Limited.
- Established supplier of technology to new entrants to the polysilicon industry—Our polysilicon production technology is recognized for its ability to produce quality polysilicon at a low cost per kilogram. Our first commissioned new polysilicon production facility was for OCI Company, Ltd., a South Korean chemical company. As one of a small number of companies providing chemical vapor deposition reactors commercially, we believe we are well positioned to successfully compete for future market expansion opportunities.
- Large presence in Asia—Many of the world's leading polysilicon producers are based in Asia where we have supplied production equipment to leading polysilicon manufacturers in the region based on polysilicon production capacity, according to data from Solarbuzz. In order to better serve this customer base, we have shifted our global operations to Asia.
- Rapid technology development and deep expertise in polysilicon production—We have been successful in rapidly developing SDR polysilicon production technology that enables higher levels of productivity and lower power consumption with each new generation of product. Our polysilicon team has decades of combined experience in engineering and product development and in operating high volume polysilicon production facilities. This expertise provides us, we believe, with a competitive advantage when it comes to understanding our customers' production needs and in developing products that meet these needs.
- Outsourced manufacturing model—As is the case in our PV segment, our polysilicon manufacturing model is different from many capital equipment manufacturers in that we outsource the components used in our polysilicon equipment. All of the components of our polysilicon products are shipped directly from our qualified vendors to the customer installation site. This model results in a highly flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees. This model also improves our competitive position by keeping our cost of operations low.

## **Polysilicon Business Growth Strategies**

Our growth strategies include:

- maintaining polysilicon technology leadership through innovation and new product development or acquiring complementary technologies or businesses to continually enhance our polysilicon product offerings; and
- protecting our customers' investments in capital equipment by providing technical improvements for existing products that enhance their productivity and efficiency.

## **Polysilicon Business Competition**

We compete on the basis of technology, delivery, service (both installation and aftermarket), cost of ownership, price and reputation. We principally compete with equipment manufacturers in the PV market for chemical vapor deposition reactors for the production of polysilicon.

Our SDR reactor products and other related services face direct competition from a small number of entities in the polysilicon production market. These competitors include MSA Apparatus Construction for Chemical Equipment Ltd, Centrotherm Elektrische Anlagen GmbH & Co., Morimatsu Industry Co. Ltd. and Poly Plant Project, Inc. We also face indirect competition from large, well-established companies that produce polysilicon primarily for the semiconductor industry. These companies have developed polysilicon production technology for their own use which they do not market to third parties. These indirect competitors include Hemlock Semiconductor Corporation, Wacker Chemie AG, MEMC Electronic Materials, Inc. and Renewable Energy Corporation ASA. We believe we compete favorably based on the reliability of our technology, our strong service and support capabilities and the cost of ownership of our equipment.

### **Sapphire Industry Overview**

Sapphire is recognized for its durability, chemical resistivity and optical transmission qualities. In the 1960s, with the development of the semiconductor industry, the first silicon-on-sapphire applications for certain electronic components was developed. Sapphire usage has grown significantly since the adoption of nitride-based light-emitting diodes, or LEDs, began use in the 1990s and (today LED applications represent the largest market segment for synthetic sapphire).

The need to reduce the cost of applications is driving sapphire crystal growers to find ways to lower the cost of producing sapphire by increasing boule size and improving yields. As production costs come down, sapphire becomes more competitive with other materials in a broader range of market opportunities. The single largest market opportunity for sapphire is, we believe, in the LED industry. LED device manufacturers are, we believe, seeking large diameter sapphire wafers to allow them to achieve economies of scale. As downstream processing technologies such as MOCVD tools, which are used to deposit Gallium Nitride (GaN) onto the sapphire wafer, increase the capability to process larger wafers diameters such as 4-inch and 6-inch substrates, the demand for large area sapphire material is expected to grow.

The design of our Advanced Sapphire Furnace (ASF<sup>®</sup>) makes it, we believe, easy to operate, scalable and capable of producing quality sapphire boules. Each ASF-grown boule is inspected by using our optical homogeneity technique (OHT), which is designed to ensure that no sub-optimized material enters the downstream processing steps. The simplicity and reliability of our ASF furnace will, we believe, allow customers to operate high volume production plants to produce sapphire material with a lower capital investment compared to other competing crystal growth technologies.

### **Our Sapphire Business**

Our sapphire business currently markets and sells of our ASF systems to customers to enable them to produce their own sapphire material. We also produce sapphire material, on a limited basis, for the LED and other specialty markets at our sapphire pilot production facility in Massachusetts. Our primary products include:

*ASF Systems*—Our ASF systems produce monocrystalline sapphire material, commonly referred to as sapphire boules. Our ASF technology is based on the heat exchanger method (HEM), which is a directional solidification technique which crystallizes the sapphire meltstock material during the growth process. We believe our sapphire pilot facility in Massachusetts gives us a competitive advantage in the sapphire equipment market place because our facility allows us to demonstrate to potential ASF system customers the operation of a state-of-the-art sapphire manufacturing facility. We also use the facility as a R&D center to test new technology developments prior to commercial release. We currently market and sell our ASF systems under the name ASF100. We intend to continue to develop our ASF system in order to provide enhancements in productivity and cost of ownership.

Certain of the components and assemblies for our ASF furnaces are manufactured to our specifications by third parties using our designs. Our manufacturing personnel focus on final assembly, integration and testing of the ASF systems. We also provide engineering and product design, quality control, process engineering, engineering services and field services related to the operation of our ASF furnaces.

*Sapphire Materials*—On a limited scale, we produce sapphire material at our pilot production facility in Massachusetts. We sell this material to customers in the LED and other markets, such as the aerospace, defense and medical device. We manufacture and sell two principal types of sapphire materials:

- **HEM Sapphire Material:** Using the material derived from the sapphire boule generated with our ASF furnaces, we cut the sapphire material in a number of different dimensions and crystal orientations, in form factors such as cores, rods, blanks, windows and tubes.
- **Titanium-doped Sapphire (Ti:Sapphire) Material:** Utilizing a proprietary production technique, we generate sapphire boules that are doped with titanium. Titanium-doped sapphire has optical qualities and other performance characteristics that make it useful in applications such as tunable lasers and photonics products. Similar to our standard sapphire material, we provide certain finishing and polishing for our Ti:Sapphire material.

### **Sapphire Business Competitive Strengths**

We believe that our competitive strengths include:

- **Rapid technology development and deep domain expertise in sapphire crystal production**—We have been successful in rapidly commercializing our ASF systems. Our sapphire engineering, product design, and support team has decades of combined experience in engineering and product development and in operating sapphire production facilities. This expertise provides us with a competitive advantage when it comes to understanding our customers' production needs and in developing products that meet these needs.
- **Large presence in Asia, a major growth market for sapphire manufacturing**—We have been doing business in Asia since 2002 and have expanded our base of operations to better serve our Asia-based customers. We believe that our relationships with leading Asia-based companies and our expanded base of operations in the region will enhance our service capabilities and competitiveness in the sapphire equipment industry.
- **Outsourced manufacturing model**—Our sapphire equipment manufacturing model is similar to that of our PV and polysilicon businesses in that we outsource the manufacture of components used in our ASF system to qualified suppliers. Our ASF systems are crated and shipped to our customer's installation sites from our Hong Kong facility. We believe that this model results in a highly flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees. This model also improves our competitive position by keeping our cost of operations low.
- **Supplier of quality sapphire material for the LED and other industrial markets**—GT Crystal Systems, utilizing 40 years of sapphire crystal growing experience, has made ongoing improvement in sapphire production and today is recognized for its ability to produce material that meets stringent technical requirements for applications such as LEDs, high power lasers, windows for the aerospace and defense industry, and other industries such as medical device and oil and gas. Our sapphire production facility provides insights on potential new technology advances for our ASF systems, and enables us to help our ASF customers continually improve their sapphire production processes.

## **Sapphire Business Growth Strategies**

Our growth strategies include:

- maintaining technology leadership in our core sapphire product areas through innovation and new product development;
- leveraging our strengths in sapphire crystal growth expertise by pursuing new opportunities in industrial markets that require the optical and mechanical performance characteristics offered by sapphire;
- protecting our customers' investments in capital equipment by providing technical improvements for existing products that enhance their productivity and efficiency;
- leveraging our sapphire materials capabilities to become a supplier of crystal growth and other production equipment to the sapphire industry; and
- developing or acquiring complementary technologies or businesses.

## **Sapphire Business Competition**

We compete on the basis of technology, reputation, delivery, service (both installation and aftermarket) and price. We face competition for the sale of our ASF systems from companies offering alternative technologies including Thermal Technology LLC, Advanced Renewable Energy Company, LLC, and several suppliers of Kyropoulos-based sapphire growth equipment. We face competition for the sale of our sapphire material from a number of well established companies. These material competitors include Rubicon Technology, Inc., Sapphire Technology Co. Ltd. (Korea), Kyocera International Inc., Saint-Gobain, Gavish Inc., and Monocrystal as well as a number of other sapphire material suppliers. We believe we compete favorably based on the reliability of our technology, our strong service and support capabilities and the cost of ownership of our equipment.

## **Photovoltaic, Polysilicon and Sapphire Customers**

We sell our equipment products and services globally to polysilicon producers, solar wafer manufacturers, and sapphire producers. Historically, our customers have included, or are suppliers to, some of the world's leading solar wafer and cell manufacturers and LED manufacturers. In any one year, we typically have a small number of customers within our business segments, some of whom represent a significant percentage of our total revenue. However, the number of our customers and their contribution to our revenue typically change from year to year, as different customers replace equipment and undertake projects to add manufacturing capacity or as we add new customers. For the nine-month period ended December 31, 2012, we had three customers, OCI Company, Ltd., Powertec Energy Corporation, and Hanwha Chemical Corporation, that represented greater than 10 percent of our total revenue, which together represented 68% of our total revenue. The following customers



comprised 10% or more of our total net revenues for the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012, and April 2, 2011:

	Nine-Month Period Ended		Fiscal Year Ended			
	December 31, 2012		March 31, 2012		April 2, 2011	
	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total
	(dollars in thousands)					
OCI Company Ltd (formerly DC Chemical Co. Ltd) .	130,912	34%	223,723	23%	*	*
Powertec Energy Corporation . . . . .	78,226	21%	*	*	*	*
Hanwha Chemical Corporation . . . . .	49,055	13%	*	*	*	*
Jiangsu GCL Silicon Material Technology Development Co. Ltd. . . . .	*	*	*	*	172,627	19%

\* Revenue from these customers was either zero or less than 10% of the total net revenue during the period.

We believe that our sales to customers in Asia will continue to be a significant portion of total sales over the next several years as we will continue to focus our polysilicon, PV and sapphire equipment sales efforts in that region. For more information about our revenue and long-lived assets by geographic region and our revenue, gross profit and assets by segment, please refer to Note 18, *Segment and Geographical Information*, in our Consolidated Financial Statements included elsewhere in this Transition Report on Form 10-K.

#### Sales, Marketing and Customer Support

We market our products principally through a direct sales force, and with respect to our equipment products we also utilize regional indirect sales representatives who solicit orders and identify potential sales opportunities in markets where our business is less established. All sales are made directly by us to the customer and our indirect sales representatives are not authorized to enter into sales contracts on our behalf.

##### *Sales terms*

We have established standard terms and conditions of sale for our products; however, sales contract terms and prices can vary and are generally negotiated on a case-by-case basis.

Payments for our polysilicon reactors, PV equipment and ASF systems are made by the customer in installments. Typically these installment payments include: (i) a deposit that must be paid via wire transfer promptly following execution of the contract, (ii) additional amounts payable during the period leading up to and/or at the time of delivery of the equipment and (iii) the balance of the amount for the equipment and services delivered at the time that the equipment meets certain contractual acceptance criteria or performance guarantees (if a customer does not conduct the acceptance tests within a specified amount of time following delivery, we are permitted to draw down on the customer's letter of credit for the balance). These installment payments are typically made by drawing the applicable amounts from letters of credit (as described further in the following paragraph).

Our equipment contracts usually require that the customer deliver to us one or more irrevocable letters of credit in an amount that is typically equal to the contract amount less the amount of the initial deposit. In very limited circumstances, a customer may not be required to deliver letters of credit if it has a sufficient operating history and an established and strong credit history. Where a letter of credit is required, the failure to provide it within the time permitted under the contract is a material

breach of the agreement that gives us the right to terminate the contract. As payments become due under the contract, we draw that amount from the letter of credit that was established by the customer.

Our equipment customers do not have the contractual right to receive a refund in the event that the equipment does not function in accordance with specifications unless we determine that such equipment cannot be repaired or replaced, which to date has not occurred. As noted above, in certain cases our polysilicon contracts contain certain negotiated performance guarantees regarding the performance and output of the equipment. In the case of polysilicon equipment sales, failure to meet the performance guarantees results in us not receiving a portion of the purchase price. In the case of PV equipment and ASF systems, failure to meet the performance guarantees, generally results in that piece of equipment either being repaired by us or replaced by us until it does satisfy the performance guarantees.

All of our equipment contracts provide that payments from customers are non-cancellable. However, our contracts generally include termination provisions. Either we or the customer may terminate the agreement upon the other's material failure to perform its obligations under the agreement (if not cured in an agreed upon time following notice) or if the other party becomes insolvent or is subject to bankruptcy or similar proceedings. Upon termination, all obligations of both parties under the contract terminate, other than provisions specified to survive termination (primarily relating to confidentiality and use of technology) and subject to the right to pursue claims for any breach triggering such termination.

In addition to the terms and conditions set forth above (which are standard for many of our contracts), the contracts also contain customary representations and warranties from both us and the customer, indemnification provisions and limitations on liability.

We have granted only one customer exclusivity rights in connection with such customer's purchase of our polysilicon and ASF equipment. Pursuant to the exclusivity provisions, we agreed not to sell the same equipment as sold to such customer in the home country of that customer for a defined period of time. The remaining contractual terms with this customer are similar to the terms with our other polysilicon and ASF customers, as applicable, as set forth above.

#### ***Product warranty***

Our polysilicon products are generally sold with a standard warranty typically for a period not exceeding twenty-four months from delivery. Our PV and sapphire equipment are generally sold with a standard warranty for technical defects for a period equal to the shorter of: (i) twelve months from the date of acceptance by the customer; or (ii) fifteen months from the date of shipment. The warranty is typically provided on a repair or replacement basis and includes both products we manufacture and products that we supply our customers from other manufacturers. To date we have been able to repair or replace equipment that initially did not meet specifications.

Our sapphire material products are generally sold with a standard warranty for a period not greater than 30 days, but in certain limited circumstances this warranty period has been extended to greater than 30 days.

Our total warranty accruals for new warranties issued was \$11.5 million for the nine-month period ended December 31, 2012, \$6.0 million for the fiscal year ended March 31, 2012, and \$11.0 million for the fiscal year ended April 2, 2011.

#### ***Customer support***

Our polysilicon production equipment and DSS and ASF crystallization furnaces are critical to the operation of our customers' manufacturing operations. Prior to an order being placed, a customer service representative advises the customer with respect to its facilities requirements and undertakes

modeling of expected operating costs. Following delivery, our engineers assist with installation and integration of equipment at the customer's facility. After the sale is complete we often provide support services for a fee. If the number of our product installations increases, we will continue to offer our service and support.

### **Manufacturing and Suppliers**

Our manufacturing model is based upon outsourcing most of the components used in our DSS and ASF systems. The limited manufacturing we perform focuses on assembly operations and the production of limited proprietary components. Nearly all of the components of our polysilicon products are shipped directly from our qualified vendors to the customer installation site. The majority of components for our DSS furnaces and ASF systems are shipped to our consolidation warehouse in Hong Kong for ultimate shipment to the customer. This model results, we believe, in a flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees.

Our DSS and ASF operation uses a "forecast manufacturing" methodology which attempts to project our raw material needs sufficiently in advance of manufacturing lead times, in an attempt to diminish the threat of spot price volatility and generally minimizing the effect of supply shortages and disruptions. We believe this approach is designed in an effort to reduce product delivery times and increase scalability, however, if customers were to delay delivery of, or cancel order for, DSS and ASF equipment, which has been the case recently, then the benefits of our "forecast manufacturing" would be limited. Delays and cancellations with respect to our DSS equipment has negatively impacted our PV business segment and we have been required to write down certain of our DSS assets that we have purchased but do not expect to sell.

Our polysilicon operations procure materials when customer orders are received.

We purchase a range of materials and components for use in our products from other manufacturers. Many component parts purchased by us are made to our specifications and under confidentiality arrangements. Purchased components represented approximately 83%, 87%, and 82% of cost of goods sold in the nine-month period ended December 31, 2012, and fiscal years ended March 31, 2012, and April 2, 2011, respectively. We attempt to secure multiple suppliers of our components to reduce our concentration risk and ensure adequate supply, but, in some cases, components and parts are obtained from a single vendor. In addition, we do not use any single supplier to produce all of the components for any single product in order to reduce the risk that a supplier could replicate our products. In many cases, but not all, we believe that these materials and components are available from multiple sources and that we are not dependent on any single supplier. We have well-established relationships with various domestic and foreign suppliers of the components used in our products. We generally are required to make a series of pre-payments to these vendors, which we fund from our working capital.

We manufacture sapphire material at our pilot production plant in Salem, Massachusetts. This facility is utilized by us for limited materials sales, to demonstrate to potential ASF equipment customers the operation of a manufacturing facility as well as for our research and development efforts.

### **Research, Development and Engineering**

Our research and development activities are focused on advancing, developing and improving technologies for the markets we serve. Our research and development efforts are currently focusing on developing our HiCz equipment offering, our Hyperion ion implantation equipment and applications, improving our ASF and polysilicon offerings, as well as developing new equipment offerings, such as silicon carbide growth equipment.

We also have cooperative research and development agreements with certain universities, customers, suppliers and other third parties. Our research and development expense was \$55.4 million in the nine-month period ended December 31, 2012, \$49.9 million in the fiscal year ended March 31, 2012 and \$23.8 million in the fiscal year ended April 2, 2011.

## **Intellectual Property**

We believe that our competitive position depends, in part, on our ability to protect our intellectual property resulting from our research, development, engineering, manufacturing, marketing, technical and customer service activities and the intellectual property obtained in connection with acquisitions. Under our intellectual property strategy we protect our proprietary technology through a combination of patents, trademarks, copyrights, know-how and trade secrets, as well as employee and third party confidentiality and assignment of rights agreements. We focus on developing, identifying and protecting our technology and resulting intellectual property in a manner that supports our overall business and technology objectives. Although we rely on intellectual property that is primarily developed in-house for our PV, polysilicon and sapphire equipment and related products, we also enter into patent and/or technology licenses with other parties when we believe such licenses would advance or complement our products and technology or would otherwise be in our best interest.

One of the principal means of protecting our proprietary technology, including technical processes and equipment designs, is through trade secret protection and confidentiality agreements. Our personnel, including our research and development personnel, enter into confidentiality agreements and non-competition agreements with us. These agreements further address intellectual property protection issues and require our employees to assign to us, among other things, all of the inventions, designs and technologies they develop during the course of their employment with us. We also generally require our customers and business partners to enter into confidentiality agreements before we disclose any sensitive aspects of our technology or business plans. These agreements, however, may be difficult to enforce in certain jurisdictions and, therefore, may be of limited value in protecting our intellectual property.

We seek patent protection in various countries when it is consistent with our strategy and the protection afforded justifies the required disclosure costs associated with the filing. We own, or have applied for, various patents and patent applications in the United States and other countries relating to our products, product uses and manufacturing processes. The patents and patent applications vary in scope and duration. As of January 16, 2013, we owned more than 60 issued patents in the PV, semiconductor, sapphire, and ion implantation fields in the United States and foreign countries, which will expire at various times between 2013 and 2030. Although the products made, sold or used under our patents or technology licenses are important to us, we believe at this time that our business as a whole is not materially dependent on any particular patent or technology license, or on the licensing of our patents or technology to third parties, other than our customers.

We have not been subject to any material claims for infringement, misappropriation or other violation of intellectual property rights, claims for compensation by employee inventors or claims disputing ownership of our proprietary technologies. We have instituted claims and actions against others for what we believe are infringement or misappropriation of our intellectual property rights.

## **Order Backlog**

Our order backlog primarily consists of amounts due under written contractual commitments and signed purchase orders for PV, polysilicon and sapphire equipment not yet shipped to customers, deferred revenue (which represents amounts for equipment that has been shipped to customers but not yet recognized as revenue) and short-term contracts or sales orders for sapphire materials. Contracts in our order backlog for PV, polysilicon and sapphire equipment generally require the customer to either post a standby letter of credit in our favor and/or make advance payment prior to shipment of equipment.

From the date of a written commitment, we generally would expect to deliver PV and sapphire equipment products over a period ranging from three to nine months and polysilicon products over a period ranging from twelve to eighteen months, however, in certain cases revenue may be recognized

over longer periods. Disregarding the effect of any contract terminations or modifications, we would expect to convert approximately 30% of our December 31, 2012 order backlog into revenue during the fiscal year ending December 31, 2013 and approximately 70% thereafter. Although most of our orders require substantial non-refundable deposits, our order backlog as of any particular date should not be relied upon as indicative of our revenues for any future period.

If a customer fails to perform its outstanding contractual obligations on a timely basis, and such failure continues after notice of breach and a cure period, we may terminate the contract. Our contracts generally do not contain cancellation provisions and in the event of a customer breach, the customer may be liable for contractual damages. In addition, during the three-month period ended December 31, 2012, we have identified certain contracts in our order backlog that have not been terminated or modified, however, we expect that certain customers will not fulfill their obligations under these respective contracts. This is the first time that we have removed such contracts from the amount we report in our order backlog. As a result, during the nine-month period ended December 31, 2012, we terminated, modified or removed contracts from our reported order backlog resulting in a \$220.5 million reduction (81% of the reduction was attributable to six contracts, of which \$121.4 million related to contracts that have not been legally terminated or modified but we have removed from our reported backlog). During the fiscal year ended March 31, 2012, we terminated or modified contracts resulting in a \$135.9 million reduction in our order backlog (74% of the reduction was from six contracts). During the nine-month period ended December 31, 2012, we recorded revenues of \$8.5 million from terminated contracts and during the fiscal year ended March 31, 2012 we recorded revenues of \$35.5 million from terminated contracts.

Although we have a reasonable expectation that most of our customers will substantially perform on their contractual obligations that are included in our reported order backlog, we attempt to monitor those contracts that we believe to be at risk. Due to recent industry market conditions, as noted above, we have removed certain amounts from our reported order backlog that are attributable to contracts that we do not believe our customers will fulfill.

We conduct negotiations with certain customers who have requested that we extend their delivery schedules or make other contract modifications, or who have not provided letters of credit or made payments in accordance with the terms of their contracts. We engage in a certain level of these negotiations in the ordinary course. We monitor the effect, if any, that these negotiations may have on our future revenue recognition. If we cannot come to an agreement with these customers or if we believe our customers cannot or will not perform their obligations, our reported order backlog could be reduced. Other customers with contracts in our order backlog that are not currently under negotiation, or that we consider to be at risk, may approach us with similar requests in the future, or may fail to provide letters of credit or to make payments when due. If we cannot come to an agreement with these customers, our order backlog could be further reduced. If we do come to an agreement with customers on extending delivery schedules, the timing of expected revenue recognition could be pushed into periods later than we had anticipated.

The table below sets forth our reported order backlog as of December 31, 2012 and March 31, 2012 by business segment:

<u>Product Category</u>	<u>December 31, 2012</u>		<u>March 31, 2012</u>	
	<u>Amount</u>	<u>% of Backlog</u> (dollars in millions)	<u>Amount</u>	<u>% of Backlog</u>
Photovoltaic business . . . . .	\$ 4	1%	\$ 138	8%
Polysilicon business . . . . .	529	42%	880	49%
Sapphire business . . . . .	716	57%	761	43%
Total . . . . .	<u>\$1,249</u>	<u>100%</u>	<u>\$1,779</u>	<u>100%</u>



Our reported order backlog attributable to our PV, polysilicon and sapphire businesses as of December 31, 2012, included deferred revenue of \$121.9 million, of which \$2.6 million related to our PV business, \$113.4 million related to our polysilicon business and \$5.9 million related to our sapphire business. Cash received in deposits related to our order backlog where deliveries have not yet occurred was \$181.1 million as of December 31, 2012.

As of December 31, 2012, our reported order backlog consisted of contracts with 8 PV customers, contracts with 15 polysilicon customers, contracts with 5 sapphire equipment customers and contracts with 54 sapphire materials customers. Our reported order backlog as of December 31, 2012 included \$429.4 million, \$261.3 million and \$155.0 million attributed to three different customers, each of which individually represents 34%, 21%, and 12%, respectively, of our reported order backlog.

### **Employees**

As of December 31, 2012, we employed 531 full-time employee equivalents and contract personnel, consisting of 145 engineering and research and development employees; 79 customer service representatives; 9 executives; 46 sales and marketing employees; 89 finance, general and administrative employees; 150 manufacturing staff; and 13 information technology employees.

As of December 31, 2012, 190 employees were located at our Merrimack and Nashua, New Hampshire facilities, 77 employees were located at our Salem, Massachusetts facility, 18 employees were located at our Danvers, Massachusetts facility, 49 employees were located at our Missoula, Montana facility, 44 employees were located at our Hazelwood, Missouri facility, 7 employees were located at our San Jose, California facility, 41 employees were located at our Hong Kong facility, 13 employees were located at our Taiwan facility, and 92 employees were located at our Shanghai facility. Following December 31, 2012, we idled the Hazelwood, Missouri facility. None of our employees are currently represented by labor unions or covered by a collective bargaining agreement. We believe that relations with our employees are satisfactory.

### **Environmental Matters**

Our Merrimack, New Hampshire and Salem, Massachusetts facilities are subject to an industrial user discharge permit governing the discharge of wastewater to the Merrimack and South Essex Sewerage District sewer systems. Our Salem, Massachusetts facility is subject to a permit related to the installation and storage of diesel sub-based fuel tanks and generators. There are no further environmental related permits required by us that are material to our business. We are not aware of any environmental issues that would have a material adverse effect on our operations.

### **Available Information**

Our internet website address is <http://www.gtat.com>. Through our website, we make available, free of charge, our annual or transition report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after such materials are electronically filed, or furnished to, the Securities and Exchange Commission, or the SEC. These SEC reports can be accessed through the investor relations section of our website. The information found on our website, or information that may be accessed through links on our website, is not part of this or any other report we file with or furnish to the SEC.

The charters of our Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee, as well as our Code of Conduct and Code of Ethics for Senior Financial Officers, and Corporate Governance Guidelines are available on our website at <http://www.gtat.com> under "Corporate Governance". These items are also available in print to any stockholder who requests them by calling (603) 883-5200. This information is also available by writing to us, attention: Corporate Secretary, at the address on the cover of this Transition Report on Form 10-K.

## **Item 1A. Risk Factors**

Our business, operating results and cash flows can be impacted by a number of factors, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results. You should carefully consider the risks described below and the other information in this Transition Report on Form 10-K. These are the risks and uncertainties we believe are most important for our business as of the date of this Transition Report on Form 10-K. Additional risks and uncertainties not presently known to us, which we currently deem immaterial or which are similar to those faced by other companies in our industry or business in general, may also impair our business operations. If any of the following risks or uncertainties actually occurs, our business, financial condition and operating results would likely suffer. In that event, the market price of our common stock could decline and an investor in our common stock could lose all or part of their investment.

### **Risks Related to Our Business Generally**

*We expect that oversupply of, or limited demand for, polysilicon, solar panels and sapphire material, including LED quality material, may have an adverse impact on our business and, unless such oversupplies are reduced or demand increases in the near future due to development of new technologies or otherwise, the negative impact on our business could last for an extended period.*

We principally sell equipment that is utilized in the manufacture of polysilicon (which is a key component to making solar wafers and cells), silicon ingots (which are, through various cutting and finishing processes, used to make solar cells, modules and wafers) and sapphire boules (which are, through various cutting and finishing processes, used to make, among other things, LED wafers). Each of the polysilicon, solar wafer, modules and cell and LED wafer markets are currently experiencing significant oversupply and/or significant decreased demand. For example, our PV business experienced a 95% decrease in revenue for the nine months ended December 31, 2012 as compared to the same period in the prior year. The consequence of this oversupply and decreased demand is that those who sell into these markets (many of whom are customers for our equipment) are either required to sell at very low prices (sometimes selling at a loss) or are unable to sell at all. Many customers are experiencing large increases in their inventories. As a consequence of these conditions, demand for all of our equipment, particularly our polysilicon reactors, DSS furnaces and ASF units, has dropped significantly in the past few quarters. During the nine-month period ended December 31, 2012, we recorded net negative bookings for our PV, polysilicon and sapphire equipment in an aggregate amount of \$151.0 million. Given the markets we serve, our future bookings may be even less in twelve months ended December 31, 2013. This has had an adverse impact on our business and will continue to have such an effect, including requiring that we sell products at prices below what we usually charge or resulting in the absence of any meaningful new sales.

In addition, certain customers have requested that we delay delivery of equipment or reduce the number of equipment units they are required to purchase under existing contracts (and we expect that we may receive similar requests in the future). If the existing inventories of polysilicon, solar, modules cells/wafers and LED/sapphire materials are not reduced in the near future or demand increases, as a result of new solar or sapphire technologies that increase demand for end-products incorporating polysilicon, solar cells or sapphire material or due to other reasons, we expect that our business and results of operations will be significantly and materially impacted.

*Our Photovoltaic business has historically depended upon the Directional Solidification System (DSS) furnace for its revenue and we expect that there will be very limited, if any, revenue attributable to DSS sales in the future. Additionally, we do not expect to commercially launch our next photovoltaic tool until 2014.*

Particularly in the latter half of 2012, the global solar industry continued to experience a significant downturn that has negatively impacted the growth of the industry and the profitability of PV producers

and the companies who supply the equipment and materials used in the production of PV products such as wafers, cells and modules. The principal product line of our PV business has been the DSS family of casting furnaces that are used to produce multicrystalline ingots and MonoCast™ ingots.

Because of the high level of PV manufacturing overcapacity, we expect very limited investment in additional generation capital equipment for 2013 and beyond. As such, we intend to discontinue any significant additional investments in our DSS product line. We will endeavor to sell any DSS furnaces that we have in our inventory, but expect that demand for these will be limited. Our next generation PV equipment offering, our HiCz tool, is still under development and is projected to be commercially available in 2014. Therefore, we expect to have no meaningful sales or revenue from our PV segment in 2013. If our HiCz tool does not gain market acceptance in 2014, our PV business segment could experience prolonged periods without contributing any meaningful revenue to the business. In addition, with the idling of our facility in Hazelwood, Missouri earlier in 2013, we will no longer sell HiCz material generated by our HiCz™ tools and, while the revenue from the sale of this material was minimal, we no longer expect to have this as a source of revenue in the future.

***Impairment charges have negatively impacted our financial results for the transition period ended December 31, 2012, and additional charges, of comparable or greater magnitude, may be required in the future as a result of the prolonged downturn in the markets we serve.***

We assess our goodwill and other intangible assets and our long-lived assets for impairment when required by U.S. generally accepted accounting principles. These accounting principles require that we record an impairment charge if circumstances indicate that the asset carrying values exceed their estimated fair values. The estimated fair value of these assets is impacted by general economic conditions in the markets we serve. Deterioration in general economic conditions may result in, among other things: declining revenue which can lead to excess capacity and declining operating cash flow; reductions in management's estimates for future revenue and operating cash flow growth. All of these factors negatively impacted our PV business during the transition period ended December 31, 2012 and, as a result, we recorded a goodwill impairment charge of \$57.0 million, an intangible asset charge of \$0.5 million, asset impairments of \$29.3 million, inventory write downs of \$60.2 million and vendor advance impairments of \$8.4 million. If the PV market were to continue to deteriorate or our PV products, including our HiCz™ tool, were to not generate significant sales in the future, we could be required to take further charges and they may be material.

If our other business segments, polysilicon and sapphire, were to face the same conditions as our PV segment, we may be required to take significant impairment charges for these segments as well. Any future impairment charges may have a material adverse impact on our business and results of operations. In addition, we may be unable to adequately and timely realign our cost structure with softening demand, which would also negatively impact our results.

***China has recently experienced decreased growth rates and certain of the solar and sapphire manufacturers in China, and in Asia generally, have been unwilling or unable to continue to invest in capital equipment purchases.***

The rate of growth of the Chinese economy has experienced some decreases recently. Since Chinese companies, including solar and LED producers, ship their products to Europe, the decreased growth experienced in China is due, in part we believe, to the economic situation in Europe. The negative impact of this reduced rate of growth is compounded by the fact that the solar industry, including solar and wafer, module and cell manufacturers and polysilicon manufacturers, are confronting markets that are either experiencing decreased demand or are generating more capacity than the industry requires. These market conditions are making it difficult for these companies to generate adequate returns and many such companies are not making any capital investments in their operations, which results in much lower demand for our equipment products. For several years,

Chinese solar manufacturers relied on, we believe, easily available credit and companies were increasing rates of investment. These companies utilized these financial resources to build up their manufacturing capacity. We believe that Chinese companies have incurred some of the highest levels of debt in the solar industry. Now, however, lenders to Chinese solar companies, in particular, are no longer extending credit on favorable terms, or at all. Some of this debt is maturing and certain of these companies are unlikely to be able to make payments when due. In certain cases, local Chinese governments have had to extend credit to solar manufacturers. As a result, we expect that the demand for our products will continue to remain limited for the short-term amongst our Chinese customer base (which are among our largest customers). Also, it may be the case that customers with orders in our backlog are unable to accept delivery of our equipment or may re-negotiate terms, including requests for reduced prices, delayed delivery and decreases in the number of units shipped. Any of the foregoing would have a negative impact on our business and results of operations. These circumstances are making competition among equipment suppliers to sell to a limited number of purchasers very competitive. As competition increases, it may be the case that our competitors engage in business practices that we will not engage in (or are legally prohibited from engaging in) in order to gain business, including providing incentives or benefits that would be prohibited under the U.S. Foreign Corrupt Practices Act.

***Current or future credit and financial market conditions could materially and adversely affect our business and results of operations in several ways.***

Financial markets in the United States, Europe and Asia experienced extreme disruption in recent years, including, among other things, extreme volatility in security prices, tightened liquidity and credit availability, rating downgrades of certain investments and declining valuations of others and increased bankruptcy filings by companies in a number of industries (including several companies in the solar industry). These economic developments adversely affect businesses such as ours in a number of ways. The tightening of credit in financial markets for solar companies and sapphire companies has resulted in reduced funding worldwide, including China (where many of our customers are located), and a higher level of uncertainty for solar cell, wafer and module manufacturers and manufacturers incorporating sapphire material into their products. As a result, some of our customers have been delayed in securing, or prevented from securing, funding adequate to honor their existing contracts with us or to enter into new contracts to purchase our products. We believe a reduction in the availability of funding for new manufacturing facilities and facility expansions in the solar and sapphire industries, or reduction in demand for solar panels or sapphire material, could cause a decrease in orders for our products.

We currently require most of our equipment customers to prepay a portion of the purchase price of their orders and to provide letters of credit prior to shipping equipment. We use these customer deposits to prepay our suppliers in order to reduce the need to borrow to cover our cash needs for working capital. This practice may not be sustainable if the recent market disruptions continue or grow worse. Some of our customers who have become financially distressed have failed to provide letters of credit or make payments in accordance with the terms of their existing contracts. If customers fail to post letters of credit or make payments, and we do not agree to revised contract terms, it could have a significant impact on our business, results of operations and financial condition. The impact of these disruptions are increasingly being felt in China, and by certain of our customers which are located in China and other countries in Asia, and accounts in part for the decline in our total revenue and order backlog as compared to the nine-month period ended December 31, 2011.

We may experience further revenue and backlog reductions in the future similar to or greater than those reductions we experienced in quarter ended December 31, 2012. Credit and financial market conditions may similarly affect our suppliers. We may lose advances we make to our suppliers in the event they become insolvent because our advances are not secured or backed by letters of credit. The

inability of our suppliers to obtain credit to finance development or manufacture our products could result in delivery delays or prevent us from delivering our products to our customers.

***Ongoing trade disputes with China may adversely impact the businesses of our Chinese customers, which could harm our business and our stock price.***

Trade tensions between China and the U.S. have escalated. Most recently, in October 2012, the U.S. Commerce Department issued a final ruling and levied anti-dumping duties ranging from 18.32% to 249.96% on billions of dollars of solar panels and cells from China (and set countervailing duties from 14.78% to 15.97%). This final ruling will negatively impact our equipment customers in China. This follows a May 2012 Department of Commerce announcement of a preliminary determination that China had violated fair trade policies by “dumping” into the U.S. certain solar products at prices that were intended to advantage Chinese manufacturers. The Chinese government responded by saying these actions were deliberately provoking trade friction between the two nations. In addition, Congress has considered legislation targeting China’s currency practices, which would, among other things, impose trade sanctions against Chinese companies that ship finished goods into the U.S. at artificially low prices caused by Chinese currency manipulation. The Chinese government has indicated that passage of this legislation or similar actions could lead to retaliatory tariffs. In July 2012, the Chinese Ministry of Commerce opened investigations on imports of solar-grade polysilicon from the U.S. and South Korea that may result in trade duties on polysilicon imports from the U.S. and South Korean polysilicon manufacturers. In addition, the European Union has commenced an investigation into whether Chinese solar equipment manufacturers have dumped equipment into the E.U. in violation of trade regulations. If the E.U. imposes duties in connection with this investigation, it could harm our business since many of our Chinese customers sell into the E.U. While this risk may be mitigated to some extent if manufacturing of solar wafers and cells shifted from China to Europe (or locations in other parts of the globe) as there may be increased demand in Europe for polysilicon and PV equipment that cannot be satisfied from China at comparable prices, the E.U. may not allow Chinese companies to avoid the duties by transferring manufacturing operations to Europe. In response to the E.U. investigation, in November 2012, the Chinese Ministry of Commerce announced that it was commencing a trade investigation into European exports of solar-grade polysilicon. Retaliatory tariffs and trade tensions with China and the U.S. and Europe (as well as South Korea, where some of our equipment customers are located) is causing uncertainty in the industry and is having a material adverse impact on our business since we sell into China and our equipment customers sell end products into Europe and the U.S. Our business and results of operations would be negatively affected if further anti-dumping or other duties were imposed or a trade war was to occur with China (or if the duties already imposed are not removed). In addition, we expect that any further announcements about or imposition of duties by the U.S. government or E.U. on solar cells imported from China or relating to duties imposed on polysilicon manufacturers by the Chinese government could negatively impact our stock price and may have a material adverse effect on our business and results of operations.

***Our credit arrangement contain covenants that impose significant restrictions on us, and if we are unable to comply with financial or other covenants we may be required to pay all or a portion of the indebtedness prior to maturity which could have a significant and adverse impact on our business.***

On January 31, 2012, we entered into a credit agreement, or Credit Agreement, with Bank of America, N.A. and certain other lenders, which was subsequently amended in June 2012 to, among other things, increase the amounts borrowed under the term facility component of the Credit Agreement. The Credit Agreement was amended (the “2013 Amendment”) on February 27, 2013 and provided, among other things, that we agree to pre-pay \$40 million of the term loan. The Credit Agreement contains covenants and conditions that restrict our ability to incur certain additional debt, pay dividends and make distributions, enter into specified transactions with affiliates, acquire businesses, among others, and resulted in liens being placed on certain of our properties and assets.



The terms of the Credit Agreement also impose financial covenants on us and our subsidiaries relating to our leverage ratio and interest coverage ratio.

For the nine-month period ended December 31, 2012, we incurred a loss from operations of \$146.7 million, a net loss of \$142.3 million, and used \$151.5 million in cash for operating activities. We expect that the challenges facing the polysilicon, photovoltaic and sapphire industries will continue through calendar year 2013. As a result, much of our business for calendar year 2013 is expected to result from filling orders in backlog and we do not expect any meaningful revenue from new contracts during 2013. As a result of the forgoing conditions, we anticipate that we would not be able to maintain compliance with the minimum interest coverage ratio and maximum leverage ratio (in our 2012 Credit Agreement with Bank of America N.A. and the other lenders) as of March 31, 2013 (or for the remainder of 2013). In order to avoid a potential breach of the minimum interest coverage ratio and maximum leverage ratio, the 2013 Amendment provided that these covenants were waived through June 2014 and new covenants were put in place that require that, through the period ending June 2014, we maintain at all times minimum levels of liquidity (as defined in the 2013 Amendment), and quarterly cumulative minimum amounts of Consolidated Adjusted Earnings Before Interest, Tax, Depreciation and Amortization (as defined in the 2013 Amendment). In the event that we are unable to achieve our operating forecasts we may be unable to comply with these new covenants and we may be required to pay all outstanding amounts due under the 2012 Credit Agreement.

If our cash and cash equivalents were to decrease (as a result of a breach of the financial covenants imposed pursuant to the 2013 Amendment, investing in the business without generating material amounts of equipment sales, or other cash expenditures related to the business), we may, in the future, be in breach of the financial covenants and the amounts outstanding under the Credit Facility would be immediately due and payable.

The foregoing restrictions in the Credit Agreement (including in the 2013 Amendment) may limit our ability to operate our business and our failure to comply with any of these covenants could result in the acceleration of our outstanding indebtedness under the Credit Agreement. In addition, if we were to default on our 3.0% Convertible Senior Notes due 2017 and the payment of such notes was accelerated, the amount under the Credit Agreement would also accelerate, and vice versa. If such acceleration occurs, we would be required to repay our indebtedness, and we may not have the ability to do so or we may not be able to refinance our indebtedness, which would prevent us from investing in our business in an effort to grow our operations. Even if new financing is made available to us, it may not be available on acceptable or reasonable terms. An acceleration of all or a significant portion of our indebtedness could impair our ability to operate as a going concern.

***Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.***

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness, including our 3.0% Convertible Senior Notes due 2017 and our Credit Agreement depends on our future performance and available cash, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures (particularly if there were to be a default under either or both credit arrangements that would accelerate the payments due thereunder). If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

***If our customers delay or cancel equipment purchases, we may be required to modify or cancel contractual arrangements with our suppliers which may result in the loss of deposits or pre-paid advances, which losses have been significant in the past.***

As a result of our customer delays or contract terminations, we reschedule or cancel, from time to time, purchase orders with our vendors to procure materials and, in certain cases, we are required to forfeit deposits and/or reimburse the vendor for costs incurred to the date of termination plus predetermined profits. We have recorded significant losses resulting from rescheduled and/or canceled commitments to our vendors as a result of customer delays, contract modifications and terminations. For example, in the nine months ended December 31, 2012, we recorded losses of \$8.4 million due to the expectation that we will not take inventory for which we had previously made down payments to our vendors. In addition, we expect to terminate purchase commitments for DSS inventory components in fiscal 2013 and beyond. The gross amount outstanding under the purchase orders was \$18.7 million at December 31, 2012 and we will negotiate with our vendors to determine the amount payable upon termination. Certain of the vendors from whom we purchased materials have been unable to deliver the ordered components because economic conditions had an adverse impact on their ability to operate their businesses and we were unable to recover advances paid to those vendors for components that were not delivered and, in some cases, these lost advances were significant amounts. In cases where we are not able to cancel or modify vendor purchase orders due to customer delays or terminations, our purchase commitments may exceed our order backlog requirements and we may be unable to redeploy the undelivered equipment. In addition, we expect that we may be required to pay advances to vendors in the future without being able to recover that advance if the vendor is placed in bankruptcy, becomes insolvent or otherwise experiences financial distress.

Delays in deliveries, or cancellations of orders, for products of all of our segments could cause us to have inventories in excess of our short-term needs and may delay our ability to recognize, or prevent us from recognizing, revenue on contracts in our order backlog. Alternatively, we may be required to sell products below our historical selling prices, which was the case for certain recent DSS equipment sales. We have recently experienced significant increases in the amount of inventory that we hold in order to meet certain anticipated demands for our products including our DSS equipment and ASF systems. Contract breaches or cancellation of orders may require us to reschedule and/or cancel additional commitments to vendors in the future and require that we write-down any inventory purchased that we are unable to deploy or require that we sell products at prices that are below our historical prices, which would also have a negative impact on our gross margins.

***Amounts included in our order backlog may not result in actual revenue or translate into profits.***

Our order backlog is primarily based on signed purchase orders or other written contractual commitments. We cannot guarantee that our order backlog will result in actual revenue in the originally anticipated period, or at all. During the three-month period ended December 31, 2012, we have identified certain contracts in our order backlog that have not been terminated or modified, however, we expect that certain customers will not fulfill their obligations under these respective contracts. This is the first time that we have removed such contracts from the amount we reported in our order backlog. As a result, during the nine-month period ended December 31, 2012, we terminated, modified or removed contracts from our reported order backlog resulting in a \$220.5 million reduction (81% of the reduction was attributable to six contracts, of which \$121.4 million related to contracts that have not been legally terminated or modified but which we have removed from our reported order backlog). In addition, the contracts included in our order backlog may not generate margins equal to our historical operating margins. Our customers may experience project delays or default on the terms of their contracts with us as a result of external market factors and economic or other factors beyond our or their control. If a customer fails to perform its contractual obligations and we do not reasonably expect such customer to perform its obligations, we may terminate the contract, which would result in a

decrease in our reported order backlog. In addition, our backlog is at risk to varying degrees to the extent customers request that we extend the delivery schedules and make other modifications under their contracts in our order backlog. Any contract modifications that we negotiate could likely include an extension of delivery dates, and could result in lower pricing or in a reduction in the number of units deliverable under the contract, thereby reducing our order backlog and not resulting in lesser (or no) revenue recognized from such contracts. Our order backlog includes contracts with customers to whom we have sent notices of breach for failure to provide letters of credit or to make payments when due. If we cannot come to an agreement with these customers, it could result in a further reduction of our order backlog. Other customers with contracts, however, may approach us with requests for delays in the future, or may fail to make payments when due, which could further reduce our order backlog. If our order backlog fails to result in revenue in a timely manner, or at all, we could experience a reduction in revenue, profitability and liquidity.

***We face competition in each of our business segments, and if our competitors are able to manufacture products that employ newer technologies or are otherwise more widely used than our products, and if we are unable to modify our products to adapt to such future changes, we may be unable to attract or retain customers.***

The PV energy and sapphire industries are both highly competitive and continually evolving as participants strive to increase their market share and new entrants strive to capture market share. In addition, the PV energy industry (which includes polysilicon and solar wafer, module and cell manufacturers) also has to compete with the larger conventional electric power industry. The PV and sapphire industries are also rapidly evolving and are highly competitive. Particularly with respect to the solar cell industry, new technologies are leading to rapid improvements in cell efficiencies and performance. Technological advances are, we believe, also resulting in lower manufacturing costs for these products. These developments may render existing products and/or product manufacturing equipment sold by our PV and sapphire businesses obsolete. We will therefore need to keep pace with technological advances in these industries in order to compete effectively in the future, which may require significant expenditures on research and development or investments in acquisition of other businesses and technologies. For example, our success in the sapphire market depends on our ability to expand into new applications that are based on continued advancement in the design and manufacture of sapphire and LEDs (including sapphire and non-sapphire-based LEDs) and lighting technology by others, as well as the continued demand for sapphire in the LED market (while we believe sapphire is currently one of the preferred substrate materials for certain LED applications, which is the market we believe many of our ASF customers sell into, the use of silicon substrates and substrates incorporating other materials in LED applications is currently developing). Our success in the PV market will depend on our success in commercializing our monocrystallization, or HiCz™, technology offering. Our failure to further refine our technologies and/or develop and introduce new solar power and sapphire products could cause our products to become uncompetitive or obsolete, which could adversely affect demand for our products, and our financial condition, results of operations, business and/or prospects. Many of our competitors, in each of our business segments, have, and future competitors may also have, substantially greater financial, technical, manufacturing and other resources than we do. These resources may provide our competitors with an advantage because they can realize economies of scale, synergies and purchase certain raw materials, commodities and key components at lower prices. Current and potential competitors of ours may also have greater brand name recognition, more established distribution networks and larger customer bases, and may be able to devote more resources to the research, development, promotion and sale of their products or to respond more quickly to evolving industry standards and changes in market conditions. In addition, given the ability of other parties to access our equipment, we also face low-cost competitors who may be able to offer similar products at very competitive prices.

We may not be able to maintain our current share of the market in our respective business segments as competitive intensity increases and particularly as our customers are targeted by local low-cost competitors in China and other countries. In addition, these overall markets are shrinking as demand drops and/or capacity increases. We believe that certain PV customers have already begun purchasing our competitors' equipment and installing them in their facilities. Our efforts to capitalize on technological developments in the markets in which we operate, such as the HiCz tool (which is in development), may not result in increased market share and require that we make substantial capital investments without any corresponding increase in revenues. In addition, customers may place orders to supply equipment for new facilities or future expansions with our competitors, and we believe the likelihood that our customers and others will go to competitors has increased over time. Our failure to adapt to changing market conditions and to compete successfully with existing or new competitors and/or new technological developments may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

In relation to our polysilicon business, we are not the only provider of polysilicon production equipment to the market based on a Siemens-type CVD reactor design. Although we believe our SDR reactor to be re-designed and distinct from the competing products offered by our competitors, there can be no assurance that our SDR reactor will compete successfully with their products which would have a material adverse effect on our financial condition, results of operations, business and or prospects. In addition, alternative technologies for producing polysilicon exist and, to the extent that they become more widely available, the demand for our SDR reactor may also be adversely effected. Furthermore, we believe that companies that currently produce polysilicon for their own internal use and consumption compete indirectly with our polysilicon business, as any increase in the supply of polysilicon may have an adverse effect of the demand for our SDR reactor.

***We intend to pursue business and technology acquisition and investment opportunities in the future as part of our business plan to grow and diversify our business and we expect that one or more of these acquisitions or investments will expand our product offerings into markets we have not previously served.***

Our business plan is focused on growing and diversifying our product and technology offerings. Acquiring Crystal Systems, a sapphire manufacturer, was part of this business plan to extend our offerings beyond polysilicon and PV markets. We expect that achieving these goals of growth and diversification will include the acquisition of businesses and technologies from third parties or investments in third parties (that may lead to future acquisitions or rights to technology) and expect that in the future we will continue to engage in negotiations for such acquisitions, investments or joint venture arrangements. In order to achieve our objective of diversifying our business to technologies outside of polysilicon, photovoltaic and sapphire, we expect that some of these acquisitions will be in markets or industries that may be unrelated to those markets we currently serve. We are, however, an equipment company and we currently expect that future acquisitions will continue to be for the purpose of accessing technologies that will enable us to provide equipment to our customers. This business diversification plan involves risks. Our stock may be valued differently depending on what markets we serve in the future. Diversification may also require significant time and resource commitments from our senior management, which will limit the amount of time these individuals will have available to devote to our existing operations. This diversification may also involve the complexities in managing an employee base that is already located in several different locations and in effectively deploying, operating and utilizing our internal systems, including those related to financial reporting, and other systems we depend on.

We may also have very little experience in dealing with these new markets and products. Any failure or any inability to effectively manage and integrate the growth and diversification could have a material adverse effect on our business, financial condition and results of operations. In addition, and

amounts that we invest may not generate any returns for us and we could lose the entire amount of the investment.

Finally, we may not be successful in acquiring any new businesses or technologies, despite our efforts to do so, and there can be no certainty that we will acquire any other companies or technologies that allow us to diversify. If we do not close acquisitions in accordance with our business plan or make successful investments, we may not be able to diversify revenue and our performance will be tied directly to the PV and sapphire markets, and if one or both experience difficulties, our business, financial condition and results of operations would be negatively impacted.

***We currently depend on a small number of customers in any given fiscal period for a substantial part of our sales and revenue.***

In each fiscal period, we depend on a small number of customers for a substantial part of our sales and revenue. For example, in the nine months ended December 31, 2012, three customers accounted for 68% of our revenue and in the fiscal year ended March 31, 2012, one customer accounted for 23% of our revenue. In addition, as of December 31, 2012, we had a \$1.2 billion order backlog of which \$845.7 million was attributable to three customers. The failure of our major customers to make any payments, the loss of existing orders or lack of new orders in the future, or a change in the product acceptance schedule by such customers could significantly reduce our revenues and have a material adverse effect on our financial condition, results of operations, business and/or prospects. While we have sought to diversify our business and customer base, we anticipate that our dependence on a limited number of customers will continue for the foreseeable future. There is a risk that existing customers will elect not to do business with us in the future, particularly as we face increased competition in each of our business segments, and/or that these customers will experience financial difficulties. Furthermore, due to the cost of our products, our customers are often dependent on the equity capital markets and debt markets to finance their purchases. As a result of on-going turmoil in the capital and debt markets, these customers could experience financial difficulties and become unable to fulfill their contracts with us. There is also a risk that these customers will attempt to impose new or additional requirements on us that reduce the gross margins that we are able to generate through sales to such customers. If we do not develop relationships with new customers, we may not be able to increase, or even maintain, our revenue, and our financial condition, results of operations, business and/or prospects may be materially adversely affected.

***General economic conditions may have an adverse impact on demand for our products and result in charges for excess or obsolete inventory.***

Purchasing our products requires significant capital expenditures, and demand for such products is affected by general economic conditions. A downturn in the global construction market has reduced demand for solar panels in new residential and commercial buildings, which in turn reduces demand for our products that are used in the manufacture of PV wafers, cells and modules and polysilicon for the solar power industry (including our DSS units and SDR reactors). In addition, a downturn or lack of growth in the sapphire material market, and the sapphire-based LED and general illumination markets in particular, have resulted in reduced demand for our sapphire material and our ASF systems. Uncertainties about economic conditions, negative financial news, potential defaults by or rating downgrades of debt issued by governmental entities and corporate entities, tighter credit markets and declines in asset values have, in the recent past, caused our customers to postpone or cancel making purchases of capital equipment and materials. We believe that increasing governmental budgetary pressures will likely result in reduced, or the elimination of, government subsidies and economic incentives for on-grid solar electricity applications. A prolonged downturn in the global economy, combined with decreased governmental incentives for solar power usage, would have a material adverse



effect on our business in a number of ways, including decreased demand for our products, which would result in lower sales, reduced backlog and contract terminations.

Uncertainty about future economic conditions makes it challenging for us to: forecast demand for our products and our operating results, make business decisions and identify the risks that may affect our business. For example, our inventory balances have increased substantially recently and, during the three-month period ended December 31, 2012, we determined that we were unable to deploy certain of our PV inventory and had to take a significant impairment charge. If our remaining PV inventory, or the inventory we have built up for polysilicon or sapphire equipment, cannot be sold or utilized in our operations and becomes excess or obsolete, we could be required to take another write down or multiple write downs and the amount or amounts may be material. If we are not able to timely and appropriately adapt to changes resulting from the difficult macroeconomic environment, including by maintaining appropriate inventory levels, our business, results of operations and financial condition may be materially and adversely affected.

***Our success depends on the sale of a limited number of products.***

A significant portion of our operating profits has historically been derived from sales of DSS units, SDR reactors, STC converters, hydrochlorination equipment and ASF units, which sales accounted for 81% and 86% of our revenue for the three and nine months ended December 31, 2012. There can be no assurance that sales of this equipment will increase beyond, or be maintained at, past levels or that any sales of sapphire materials (or any other future product offering) will offset any decrease in sales of DSS furnaces, ASF systems or SDR reactors (or result in any revenue). Additionally, we have already experienced decreased demand for all of our equipment products, and specifically sales of our STC converters and DSS furnaces are substantially lower than in prior periods due to changes in technology and decreased demand, and further changes in technology will also, we expect, result in a further reduction in demand and decreased average selling prices for our DSS multicrystalline furnace, if we are able to sell any of these DSS furnaces at all. Due to these circumstances, we intend to discontinue any significant additional investments in our DSS product line and will only be selling furnaces that we have in inventory. Factors affecting the level of future sales of our products include factors beyond our control, including, but not limited to, demand for solar products and sapphire material (including sapphire-based LED material and sapphire use in general illumination and in mobile devices), development and/or use of alternatives to sapphire in LED applications (including in general illumination) and competing product offerings by other equipment manufacturers. We may be unable to diversify our product offerings and thereby increase or maintain our revenue and/or maintain our profits in the event of a decline in ASF systems and SDR reactors sales and to off-set the discontinuation of our DSS product line.

If sales of our PV, polysilicon or sapphire products continue to decline for any reason, our financial condition, results of operations, business and/or prospects could be materially adversely affected.

***We depend on a limited number of third party suppliers.***

We use certain component parts supplied by either a single or a small number of third party suppliers in our polysilicon, PV and sapphire equipment products and ancillary equipment, and certain of these components are critical to the manufacture and operation of certain of our products. For example, we use specialist manufacturers to provide vessels and power supplies which are essential to the manufacture and operation of our polysilicon products. In addition, certain of our products consist entirely of parts and components supplied by third party suppliers, and in these instances filling orders depends entirely upon parties over which we exercise little or no control, and if these contractors were unable to supply, or refused to supply, the parts and components, we would be unable to complete orders which would have a negative impact on our reputation and our business.

Our sapphire materials businesses, as well as the customers for our ASF units, also depend on suppliers of raw materials and components that are utilized during the manufacturing process. For example, the supply of qualified meltstock and crucibles used to grow sapphire materials is limited and we expect demand will increase as we sell more ASF units, and as a result, there may be an insufficient availability of these items for our sapphire materials business and sapphire research and development as currently operated or available for the purchasers of our ASF systems, which would prevent us from growing our sapphire equipment business. Similar shortages may arise if and when we commercialize a HiCz equipment offering. Further, our agreements with raw material and equipment component suppliers are typically short term in nature, which leaves us vulnerable to the risk that our suppliers may change the terms on which they have previously supplied products to us or cease supplying products to us at any time and for any reason.

There is no guarantee that we will maintain relationships with our existing suppliers or develop new relationships with other suppliers. We are also dependent on our suppliers to maintain the quality of the components and equipment we use and if the the quality were to be below our standards, our equipments offerings may not function as designed. We may be unable to identify replacement or additional suppliers or qualify their products in a timely manner and on commercially reasonable terms, or at all. Component parts supplied by new suppliers may also be less suited to our products than the component parts supplied by our existing suppliers. Certain of the component parts used in our products have been developed, made or adapted specifically for us. Such parts are not generally available from other vendors and could be difficult or impossible to obtain elsewhere. As a result, there may be a significant time lag in securing an alternative source of supply. In addition, the inability of our suppliers to support our demand could be indicative of a marketwide scarcity of the materials, which could result in even longer interruptions in our ability to supply our products.

***We utilize raw materials in manufacturing our sapphire materials and equipment and the prices for these materials fluctuate significantly and any increases in price or decrease in availability will harm our business.***

In the ordinary course of business, we are exposed to market risk from fluctuations in the price of raw materials and commodities necessary in the manufacture of our products, such as graphite, steel, copper, helium and molybdenum. We experience similar commodity risks in connection with the consumable materials utilized in our products, and in certain cases, there is very limited access to these commodities. The increase in the price of these commodities, due to further limitations of availability or to greater demand, will make our products less attractive and will harm our sapphire material and equipment businesses. If we bring more entrants into the photovoltaic, polysilicon and sapphire markets, these commodity risks increase. Any significant increase in these prices would increase our expenses, decrease demand for our products and hurt our profitability (or prevent us from being profitable). In addition, demand for our products will be negatively impacted if the prices of raw materials that are used to create polysilicon, PV materials and sapphire were to increase.

Our failure to obtain sufficient raw materials, commodities, component parts for our equipment and/or third party equipment that meet our requirements in a timely manner and on commercially reasonable terms could interrupt or impair our ability to assemble our products, and may adversely impact our goal of expanding our business, as well as result in a loss of market share. Further, such failure may prevent us from delivering our products as required by the terms of our contracts with our customers, and may harm our reputation and result in breach of contract and other claims being brought against us by our customers. Any changes to our current supply arrangements, whether to the terms of supply from existing suppliers or a change in our suppliers, may also increase our costs in a material amount.

***The prices for polysilicon and sapphire material, as well as silicon ingots, have, in the past, dropped as a result of either increased supply or decreased demand, and, at the same time, the prices for the inputs to create this output has either remained consistent or increased, which has resulted in decreased margins for polysilicon and sapphire and PV manufacturers, and if these circumstances were to continue or dampen the demand for our PV, polysilicon and sapphire equipment business would be negatively impacted.***

The prices for polysilicon, sapphire and PV materials have decreased due, in part, to either excess supply or decreasing demand for these materials. At certain times, these price drops were accompanied by an increase in the costs (or the costs have remained stable) for the consumable materials that are used in our equipment to make polysilicon, sapphire boules and PV ingots and wafers. These two factors, operating in tandem, result in decreased margins for the manufacturers selling polysilicon, sapphire boules and PV ingots and wafers, and, depending on circumstances, could result in negative margins. If this situation were to persist, we would expect that the demand for our polysilicon reactors, ASF units and our PV equipment would drop and may hamper the adoption of any new technologies we introduce (including our proposed HiCz™ equipment offering, which is still currently in development). The on-going global economic uncertainty and tightened credit markets may exacerbate these circumstances.

***We may face product liability claims and/or claims in relation to third party equipment.***

It is possible that our products could result in property damage and/or personal injury (or death), whether due to product malfunctions, defects, improper use or installation or other causes. We cannot predict whether or not product liability claims will be brought against us or the effect of any resulting negative publicity on our business, which may include loss of existing customers, failure to attract new customers and a decline in sales. The successful assertion of product liability claims against us could result in potentially significant monetary damages being payable by us, and we may not have adequate resources to satisfy any judgment against us. Furthermore, it may be difficult or impossible to determine whether any damage or injury was due to product malfunction, operator error, failure of the product to be operated and maintained in accordance with our specifications or the failure of the facility in which our products are used to comply with the facility specifications provided to our customers or other factors beyond our control. For example, one of our significant customers experienced chamber leakage involving a number of DSS units in its facilities which we believe was the result of their facility failing to conform to specifications. We nonetheless agreed to replace certain chambers at our cost. Other customers may experience similar issues in the future as a result of product defects, facilities not complying with specifications or other reasons. To date, we have not received any product liability or other claims with respect to these or any other accidents.

In addition, we have provided third party equipment in connection with our product sales (or incorporated third party components into our equipment offerings). There can be no guarantee that such third party equipment will function in accordance with our intended or specified purpose or that the customer's personnel, in particular those who are inexperienced in the use of the specialized equipment sold by us, will be able to correctly install and operate it, which may result in the return of products and/or claims by the customer against us. In the event of a claim against us due to third party equipment, we may be unable to recover all or any of our loss from the third party equipment or component provider. The bringing of any product liability claims against us, whether ultimately successful or not, could have a material adverse effect on our financial condition, results of operations, business and/or prospects.

***Our future success depends on our management team and on our ability to attract and retain key technical employees and to integrate new employees into our management team successfully.***

We are dependent on the services of our management team and our technical personnel. Although certain members of our management team are subject to agreements with us, any and all of them may

choose to terminate their employment with us on thirty or fewer days' notice. The loss of any member of the management team could have a material adverse effect on our financial condition, results of operations, business and/or prospects. There is a risk that we will not be able to retain or replace these or other key employees. Integrating new employees into our management team could prove disruptive to our daily operations, require a disproportionate amount of resources and management attention and ultimately prove unsuccessful. In addition, we are implementing our succession planning measures for our management and key staff or skilled employees. However, if we fail to successfully implement these succession plans for management and key staff when necessary, our operating results would likely be harmed.

We also depend on our technical personnel to grow our business. Recruiting and retaining capable personnel, particularly those with expertise in the polysilicon, PV and the sapphire industry, is vital to our success. There is substantial competition for qualified technical personnel, and qualified personnel are currently, and for the foreseeable future are likely to remain, a limited resource. Locating candidates with the appropriate qualifications can be costly, time-consuming and difficult. There can be no assurance that we will be able to attract new, or retain existing, technical personnel. We may need to provide higher compensation or increased training to our personnel. If we are unable to attract and retain qualified personnel, or are required to change the terms on which our personnel are employed, our financial condition, results of operations, business and/or prospects may be materially adversely affected.

***New technologies we deploy may not gain market acceptance which could result in decreased cash resources and harm our results of operations.***

We have expended significant financial resources and technical expertise in developing new products and services that we expect will improve our product portfolio and result in increased revenues. These investments, however, may not result in increased revenues and may require that we incur expenses that result in decreasing our cash balances. For example, we have already spent approximately \$60 million (and may spend additional amounts in contingent payments and additional significant capital spending) in connection with our acquisition of Confluence Solar, which we ultimately expect will result in a PV equipment offering, or HiCz™, that is to be designed to produce high efficiency monocrystalline solar ingots, and which is expected to lower PV production costs. In addition, we have purchased certain select assets and intellectual property from a third party related to the Hyperion ion implant technology and have invested significant amounts in our internal research and development efforts for other technologies, including silicon carbide growth technologies. Our HiCz offering will target improved ingot efficiencies compared to that of multicrystalline silicon materials.

The HiCz, Hyperion ion implantation and silicon carbide development efforts, which are among the new product offerings we are in the process of developing, require that we expend significant cash and time resources. If we are not successful in commercializing one or more of these new product lines, we would lose the significant investments we made in our internal development efforts and in the acquisitions we have made. In addition, certain of these proposed products, such as the Hyperion ion implantation tool, may take years to bring to market and we may be unable to timely generate revenue from these projects, if we are able to generate any revenue at all.

We also have no experience in manufacturing and selling HiCz equipment, the Hyperion ion implantation equipment and silicon carbide manufacturing equipment, and we may be unable to commercialize these products or ensure they gain wide-spread market acceptance. We may also have issues with installing these products in customer facilities or in training customers to properly operate this equipment, which would likely prevent us from recognizing revenue on sales of this equipment. If we are unable to bring any of these products to market and generate substantial sales, we may be unable to recover any or all of the investments we have made in them. Given the pace of technological advancements in the PV equipment industry, it is possible that monocrystalline production may not

gain meaningful market share as other companies develop products that generate solar cells offering even higher efficiency. Alternatively, there are competing monocrystalline production techniques that may result in a more efficient solar wafer and/or equipment that can make comparable quality silicon at equipment prices below what we charge or at which our equipment makes ingots. We face similar challenges and competition with respect to any ion implantation, silicon carbide or other equipment product we may bring to market. Any of the foregoing would have a significant and negative impact on our business and results of operation.

***We may be unable to protect our intellectual property adequately and may be required to initiate litigation to enforce our intellectual property rights.***

Our ability to compete effectively against our competitors in the PV, polysilicon and sapphire markets will depend, in part, on our ability to protect our current and future proprietary technologies, product designs, product uses and manufacturing processes under relevant intellectual property laws including, but not limited, to laws relating to patents and trade secrets. We own various patents and patent applications in the United States and other countries relating to our products, product uses and manufacturing processes. To the extent that we rely on patent protection, our patents may provide only limited protection for our technology and may not be sufficient to provide competitive advantages to us. For example, competitors could develop similar or more advantageous technologies or design around our patents or otherwise employ alternative products, equipment or processes that may successfully compete with our products and technology. In addition, patents are of limited duration. Any issued patents may also be challenged, invalidated or declared unenforceable. If our patents are challenged, invalidated or declared unenforceable, other companies will be better able to develop products that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. Further, we may not have, or be able to obtain, effective patent protection in all of our key sales territories. Our patent applications may not result in issued patents and, even if they do result in issued patents, the patents may not include rights of the scope that we seek. The patent position of technology-oriented companies, including ours, is uncertain and involves complex legal and factual considerations. Accordingly, we do not know what degree of protection we will obtain from our proprietary rights or the breadth of the claims allowed in patents issued to us or to others. Further, given the costs of obtaining patent protection, we may choose not to protect certain innovations that later turn out to be important to our business.

Third parties may infringe, misappropriate or otherwise violate our proprietary technologies, product designs, manufacturing processes and our intellectual property rights therein, which could have a material adverse effect on our financial condition, results of operations, business and/or prospects. For example, we have filed a lawsuit in the Hillsborough County Superior Court (Southern District) in New Hampshire against Advanced Renewable Energy Company, LLC (“ARC”), Kedar Gupta, its Chief Executive Officer and Chandra Khattak, an ARC employee, for the misappropriation of trade secrets relating to sapphire crystallization processes and equipment. Because the laws and enforcement mechanisms of various countries that we seek protection in may not allow us to adequately protect our intellectual property rights, the strength of our intellectual property rights will vary from country to country. Litigation to prevent, or seek compensation for such infringement, misappropriation or other violation, such as the ARC lawsuit described above, may be costly and may divert management attention and other resources away from our business without any guarantee of success.

Further, we conduct significant amounts of business in China, yet enforcement of Chinese intellectual property related laws (including trade secrets) has historically been weak, primarily because of ambiguities in Chinese laws and difficulties in enforcement. Accordingly, the intellectual property rights and confidentiality protections available to us in China may not be as effective as in the United States or other countries.

We also rely upon proprietary manufacturing expertise, continuing technological innovation and other know-how or trade secrets to develop and maintain our competitive position. While we generally enter into confidentiality and non-disclosure agreements with our employees and third parties to protect our intellectual property, such confidentiality and non-disclosure agreements could be breached and are limited, in some instances, in duration and may not provide meaningful protection for the trade secrets or proprietary manufacturing expertise that we hold. We have had in the past and may continue to have certain of our employees terminate their employment with us to work for one of our customers or competitors. Adequate or timely remedies may not be available in the event of misappropriation, unauthorized use or disclosure of our manufacturing expertise, technological innovations and trade secrets. In addition, others may obtain knowledge of our manufacturing expertise, technological innovations and trade secrets through independent development or other legal means and, in such cases, we may not be able to assert any trade secret rights against such a party.

***We may face claims in relation to the infringement or misappropriation of third-party intellectual property rights.***

We may be subject to claims that our products, processes or product uses infringe the intellectual property rights of others. These claims, even if meritless, could be expensive and time consuming to defend. In addition, if we are not successful in our defense of such claims, we could be subject to injunctions and/or damages, or be required to enter into licensing arrangements requiring royalty payments and/or use restrictions. In some instances, licensing arrangements may not be available to us or, if available, may not be available on acceptable terms.

Due to the competitive nature of the industries in which we participate, we may face potential claims by third parties of infringement, misappropriation or other violation of such third parties' intellectual property rights. From time to time we have received and may in the future receive notices or inquiries from other companies suggesting that we may be infringing their patents or misappropriating their intellectual property rights. Such notices or inquiries may, among other things, threaten litigation against us. Furthermore, the issuance of a patent to us does not guarantee that we have the right to practice the patented invention. Third parties may have blocking patents that could be used to prevent us from marketing our own patented product and practicing our own patented technology. In addition, third parties could allege that our products and processes make use of their unpatented proprietary manufacturing expertise and/or trade secrets, whether in breach of confidentiality and non-disclosure agreements or otherwise. If an action for infringement, misappropriation, or other violation of third party rights were successfully brought against us, we may be required to cease our activities on an interim or permanent basis and could be ordered to pay compensation, which could have a material adverse effect on our financial condition, results of operations, business and/or prospects. Additionally, if we are found to have willfully infringed certain intellectual property rights of another party, we may be subject to treble damages and/or be required to pay the other party's attorney's fees. Alternatively, we may need to seek to obtain a license of the third party's intellectual property rights or trade secrets, which may not be available, whether on reasonable terms or at all, and such technology may be licensed to other parties thereby limiting any competitive advantage to us. In addition, any litigation required to defend such claims brought by third parties may be costly and may divert management attention and other resources away from our business, without any guarantee of success. Moreover, we may also not have adequate resources to devote to our business in the event of a successful claim against us.

From time to time, we hire personnel who have obligations to preserve the secrecy of confidential information and/or trade secrets of their former employers. Some former employers monitor compliance with these obligations. While we have policies and procedures in place that are intended to guard against the risk of breach by our employees of confidentiality obligations to their former employers, there can be no assurance that a former employer of one or more of our employees will not

allege a breach and seek compensation for alleged damages. If such a former employer were to successfully bring such a claim, our know-how and/or skills base could be restricted and our ability to produce certain products and/or to continue certain business activities could be affected, to the detriment of our financial condition, results of operations, business and/or prospects.

*The international nature of our business subjects us to a number of risks, including unfavorable political, regulatory, labor and tax conditions in foreign countries.*

A substantial majority of our marketing and distribution takes place outside the United States, primarily in China, and substantially all of our sales are to customers outside the United States. We also have contracts with customers in Europe and expect to recognize revenue from sales to customers in Asia and Europe in the future. In addition, we have transitioned our global operations center to Hong Kong, further increasing our exposure to the risks of operating in Asia. As a result, we are subject to the legal, political, social and regulatory requirements and economic conditions of many jurisdictions other than the United States. Risks inherent to maintaining international operations, include, but are not limited to, the following:

- trade disputes between the United States and countries where we deliver our products to our customers, as well as trade disputes between countries in which our customers manufacture and those countries in which our customers sell end-products, including their sales of solar wafers, cells and modules, and sapphire materials produced with our furnaces or reactors, which could result in government or trade organization actions that have the effect of increasing the price for our and our customers' products which would have a corresponding decrease in the demand for our products;
- withholding taxes or other taxes on our foreign income, and tariffs or other restrictions on foreign trade and investment, including currency exchange controls imposed by or in other countries;
- the inability to obtain, maintain or enforce intellectual property rights in other jurisdictions, at a reasonable cost or at all;
- difficulty with staffing and managing widespread and growing international operations;
- complying with regulatory and legal requirements in the jurisdictions in which we operate and sell products;
- effectively operating and maintaining our internal controls and financial reporting processes across multiple countries;
- trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make our product offering less competitive in some countries; and
- establishing ourselves and becoming tax resident in foreign jurisdictions.

Our business in foreign markets requires us to respond to rapid changes in market conditions in these countries. Our overall success as a global business depends, in part, on our ability to succeed under differing legal, regulatory, economic, social and political conditions. There can be no assurance that we will be able to develop, implement and maintain policies and strategies that will be effective in each location where we do business. As a result of any of the foregoing factors, our financial condition, results of operations, business and/or prospects could be materially adversely affected.



***We are a global corporation with significant operations in Asia, and challenges by various tax authorities to our global operations could, if successful, increase our effective tax rate and adversely affect our earnings.***

We are a Delaware corporation that operates through various subsidiaries in a number of countries throughout the world, including in Asia. We established our global operations center in Hong Kong and have significant operations in Asia. Our income taxes are based upon the applicable tax laws, treaties, and regulations in the many countries in which we operate and earn income as well as upon our operating structures in these countries. While we believe that we carefully analyze and account for the tax risks and uncertainties under the applicable rules, multiple tax authorities could contend that a greater portion of our and our subsidiaries' income should be subject to income or other tax in their respective jurisdictions. If successful, these challenges could result in an increase to our effective tax rate. In addition, if we continue to generate revenue in higher tax jurisdictions, as was the case during the nine-month period ended December 31, 2012, our effective tax rate may continue to increase.

We continue to monitor the impact of various international tax proposals and interpretations of the tax laws and treaties in the countries where we operate, including those in the United States, China, Hong Kong, and other countries. If enacted, certain changes in tax laws, treaties, regulations, or their interpretation could result in a higher tax rate on our earnings, which could result in a significant negative impact on our earnings and cash flow from operations.

***Compliance with the legal systems of the countries in which we offer and sell our products could increase our cost of doing business.***

We offer and sell our products internationally, including in some emerging markets. As a result, we are and/or may become subject to the laws, regulations and legal systems of the various jurisdictions in which we carry on business and/or in which our customers or suppliers are located. Among the laws and regulations applicable to our business are health and safety and environmental regulations, which vary from country to country and from time to time. We must therefore design our products and ensure their manufacture so as to comply with all applicable standards. Compliance with legal and regulatory requirements, including compliance with any change in existing legal and regulatory requirements, may cause us to incur material costs and may be difficult, impractical or impossible. In addition, China's legal system, where we do a significant amount of business, is rapidly evolving and, as a result, the interpretation and enforcement of many laws (including intellectual property laws), regulations and rules are not always uniform and legal proceedings in China often involve uncertainties and legal protections afforded are uncertain and may be limited. In addition, any litigation brought by or against us in China may be protracted and may result in substantial costs and diversion of resources and management attention and the anticipated outcome would be highly uncertain.

Accordingly, foreign laws and regulations which are applicable to us may have a material adverse effect on our financial condition, results of operations, business and/or prospects. As a result of the procedural requirements or laws of the foreign jurisdictions in which we carry on business and/or in which our customers or suppliers are located, we may experience difficulty in enforcing supplier or customer agreements or certain provisions thereof, including, for example, the limitations on the product warranty we typically include in our equipment sales contracts. In some jurisdictions, enforcement of our rights may not be commercially practical in light of the duration, cost and unpredictability of such jurisdiction's legal system. Any inability by us to enforce, or any difficulties experienced by us in enforcing, our contractual rights in foreign jurisdictions may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

***We are subject to export restrictions and laws affecting trade and investments, and the future sale of our products may be further limited or prohibited in the future by a government agency or authority.***

As a global company headquartered in the United States, our products and services are subject to U.S. laws and regulations that may limit and/or restrict the export (and re-export from other countries) of some of our products, services and related product and technical information. We are also subject to the export and import laws of those foreign jurisdictions to which we sell or from which we re-export our products. Compliance with these laws and regulations could significantly limit our operations and our sales in the future and failure to comply could result in a range of penalties, including restrictions on exports of all of our products for a specified time period, or forever, and severe monetary penalties. In certain circumstances, these restrictions may affect our ability to interact with our foreign subsidiaries and otherwise limit our trade with third parties (including vendors and customers) operating inside and outside the U.S. In addition, as we introduce new products, we may need to obtain licenses or approvals from the US and other governments to ship them into foreign countries. Failure to receive the appropriate approvals may mean that our development efforts (and expenses related to such development) may not result in any revenue, particularly as most of our customers are located in foreign jurisdictions. This would have a material and adverse impact on our business and our development efforts.

In addition, certain customers of our sapphire materials business operate in the defense sector or are subcontractors of companies in the defense industry, and our products may be incorporated in, among other things, missiles, military aircraft and aerospace systems. In addition, Crystal Systems has received funding from the U.S. government in connection with certain research work for certain U.S. government agencies. Certain work performed pursuant to certain of these contracts is not commercially available, but we may make it available commercially in the future. The State Department, the Commerce Department or other government agencies may, however, determine that our sapphire material or other products, including our ASF systems, PV furnaces and/or polysilicon reactors, are important to the military potential of the U.S. If so, we may be subject to more stringent export licensing requirements or prohibited from selling certain of our sapphire materials (for certain applications or end uses), ASF systems, PV furnaces and/or polysilicon reactors to any customer outside the U.S. or to customers in certain jurisdictions. The U.S. government has, and will likely continue to, vigorously enforce these laws in light of continuing security concerns. If the export or sale of any of our current or future products outside the U.S. are limited or restricted by the U.S. government or any foreign government, our operations and results of operations would be negatively impacted.

***We face particular political, market, commercial, jurisdictional and legal risks associated with our business in China.***

We have had significant sales in China, accounting for 23% of our revenue in the nine-month period ended December 31, 2012, 52% of our revenue in the fiscal year ended March 31, 2012 and 71% of our revenue in the fiscal year ended April 2, 2011. Further, we have significant facilities and operations in China. Accordingly, our financial condition, results of operations, business and/or prospects could be materially adversely affected by economic, political and legal conditions or developments in China.

In November 2012, China selected a new leadership group to run the government of the country. In China, the government has significant impact on what industries will receive financial and government assistance. At this point, the new government's economic priorities are unclear, but it may be the case that they will not be supportive of alternative energy industries, such as solar manufacturing, or of sapphire manufacturing. The Chinese government is able to exercise such control through its direct control over capital investments or changes in tax regulations that may be applicable to us. In addition, a substantial portion of the productive assets in China remain government owned. The Chinese government also exercises significant control over Chinese economic growth through the

allocation of resources, controlling payment of foreign currency denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. If the solar and/or sapphire industries are not a priority, our customers will likely have a difficult time expanding their operations and may have difficulty continuing their operations (particularly if direct and indirect financial support for our customers is reduced). This would have a negative impact on all of our business segments and, we expect, our results of operations.

Any factors that result in slower (or decreased) growth in China could result in decreased capital expenditures by solar and sapphire product manufacturers, which in turn could reduce demand for our products. Additionally, China has historically adopted laws, regulations and policies which impose additional restrictions on the ability of foreign companies to conduct business in China or otherwise place them at a competitive disadvantage in relation to domestic companies. Any adverse change in economic conditions or government policies in China could have a material adverse effect on our overall growth and therefore have an adverse effect on our financial condition, results of operations, business or prospects.

We have expanded our presence in China, including in the areas of customer service, certain manufacturing services, administrative functions, sales and research and development. As we adopt a greater presence in China, we are increasingly exposed to the economic, political and legal conditions and developments in China, which could further exacerbate these risks, including the risk that we may not be able to obtain adequate legal protection in connection with any technological developments resulting from our research and development conducted in China.

***We have entered into business combinations and acquisitions that may be difficult to integrate, disrupt our business, expose us to litigation or unknown liabilities, dilute stockholder value and divert management attention.***

We may enter into business combinations or purchases. For example, we acquired certain assets and intellectual property related to Hyperion ion implantation in 2012, Confluence Solar in 2011 and Crystal Systems in 2010. Acquisitions and combinations are accompanied by a number of risks, including the difficulty of integrating the operations and personnel of the acquired company, disruption of our ongoing business, distraction of management, expenses related to the acquisition and potential unknown liabilities and claims associated with acquired businesses. We may be subject to (i) liability for activities of the acquired company prior to the acquisition, including environmental and tax and other known and unknown liabilities and (ii) litigation or other claims in connection with the acquired company, including claims brought by terminated employees, customers, former stockholders or other third parties.

In addition, there may, in particular, be risks and uncertainties in connection with the intellectual property rights and ownership of technology of an acquired company, including (i) the nature, extent and value of the intellectual property and technology assets of an acquired company (or of the acquired assets), (ii) the rights that an acquired company (or company selling assets) has to utilize intellectual property and technology that it claims to have developed or to have licensed, and (iii) actions by third parties against the acquired company (or company selling assets) for intellectual property and technology infringement and the extent of the potential loss relating thereto. Third parties may also be more likely to assert claims against the acquired company (or company selling assets), including claims for breach of intellectual property rights, once the company has been acquired by us.

Any inability to integrate completed acquisitions or combinations in an efficient and timely manner or the inability to properly assess and utilize the intellectual property and technology portfolio without infringing the rights of a third party could have an adverse impact on our results of operations. In addition, we may not be able to recognize any expected synergies or benefits in connection with a future acquisition, combination or asset purchase or we may be unable to effectively implement the

business plan for the acquired company or assets, which would prevent us from achieving our financial and business goals for the business.

If we are not successful in completing acquisitions or combinations that we may pursue in the future, we may incur substantial expenses and devote significant management time and resources without a successful result. In addition, future acquisitions could require use of substantial portions of our available cash or result in the incurrence of debt or dilutive issuances of securities. If we were to incur additional debt in the future in connection with an acquisition, or otherwise, it may contain covenants restricting our future activities, may incur significant interest rates or penalties for breach and we may be unable to generate sufficient cash to pay the principal or interest. Also, any issuance of equity securities may be dilutive. Acquisitions and combinations also frequently require the acquiring company to recognize significant amounts of intangible assets, such as goodwill, patents and trademarks and customer lists, in an acquisition, which amounts may be subject to a future impairment if we are unable to successfully implement the operating strategy for the acquired company or acquired assets.

***We may, in the future, make investments in third party businesses or enter into joint development or similar agreements with third parties and these may require significant expenses and may not result in any technological or financial benefits.***

We have entered into, and we may in the future enter into, arrangements in which we invest in another business without owning all of the voting control of the entity or without the ability to control the decision-making of the entity or we may enter into joint development or similar arrangements for the development of technology or sale of products. Investments of this nature can require a significant commitment of our time, attention, cash and financial resources and technology sharing. If we do not have a controlling stake in these companies, it is likely that such entities may make their own business decisions that may not always align with our interests. In addition, some of the entities that we invest in, or enter into development projects with, will very likely have the right to manufacture or distribute their own products or certain products of our competitors. If we are unable to provide an appropriate mix of incentives to the companies that we invest in or in which we enter joint venture or similar arrangements, these other parties, through a combination of pricing and marketing and advertising support or otherwise, may take actions that, while maximizing their own short-term profits, may be detrimental to us or our brands, or they may devote more of their energy and resources to business opportunities or products other than those that generate a return for us. Such actions could, in the long run, have an adverse effect on our financial results. In addition, these types of investments may not ultimately generate the returns that we expect when we entered into the arrangements, which could result in a decrease in our cash holdings and loss of our entire investment.

***Our ability to supply a sufficient number of products to meet demand could be severely hampered by natural disasters or other catastrophes.***

Currently, a portion of our operations are located in Asia and we increased our presence in Asia by opening our global operations center in Hong Kong. Additionally, a significant portion of our revenue is generated from customers that install our equipment in Asia and many of our suppliers are also located in Asia. These areas are subject to natural disasters such as earthquakes and floods. A significant catastrophic event such as earthquakes, floods, war, acts of terrorism or global threats, including, but not limited to, the outbreak of epidemic disease, could disrupt our operations and impair distribution of our products, damage inventory or facilities, interrupt critical functions, cause our suppliers to be unable to meet our demand for parts and equipment, reduce demand for our products, prevent our customers from honoring their contractual obligations to us or otherwise affect our business negatively. To the extent that such disruptions or uncertainties result in delays or our inability to fill orders, causes cancellations of customer orders, or results in our inability to manufacture or ship

of our products, our business, operating results and financial condition could be materially and adversely affected.

***We may be subject to concentration of credit risk related to our cash equivalents and short-term investments.***

We may be exposed to losses in the event of nonperformance by the financial counterparties to our cash equivalent investments and short term investments. This risk may be heightened as a result of the financial crisis and volatility in the markets. We attempt to manage the concentration risk by making investments that comply with our investment policy. Currently, our cash equivalents are invested in cash deposit accounts and money market mutual funds at our financial institutions. Although we do not currently believe the principal amounts of these investments are subject to any material risk of loss, the recent volatility in the financial markets is likely to significantly impact the investment income we receive from these investments. In general, increases of credit risk related to our cash equivalents and short-term investments could have a material adverse effect on our financial condition, results of operations, business and/or prospects.

***Our level of indebtedness may limit our financial flexibility.***

As of December 31, 2012 our total consolidated indebtedness was approximately \$360 million (which amount includes the portion of our 3.0% convertible notes due 2017 allocated to equity of \$65 million) and our unrestricted cash was approximately \$418 million. Our level of indebtedness affects our operations in several ways, including the following:

- a portion of our cash flows from operating activities must be used to service our indebtedness and is not available for other purposes;
- we may be at a competitive disadvantage as compared to similar companies that have less debt;
- the covenants contained in the agreements governing our outstanding indebtedness and future indebtedness may limit our ability to borrow additional funds, pay dividends and make certain investments and may also affect our flexibility in planning for, and reacting to, changes in the economy and in our industry;
- additional financing in the future for working capital, capital expenditures, acquisitions, general corporate or other purposes may have higher costs and more restrictive covenants, or may not be available to us; and
- a lowering of the credit ratings of our debt may negatively affect the cost, terms, conditions and availability of future financing, and lower ratings will increase the interest rate we pay on any future corporate bank credit facility.

Many of these factors are beyond our control. Factors that will affect our ability to raise cash through an offering of our capital stock or a refinancing of our debt include financial market conditions, the value of our assets and our performance at the time we need capital. In addition, our failure to comply with the financial and other covenants relating to our indebtedness could result in a default under that indebtedness and acceleration of amounts due, which could adversely affect our business, financial condition and results of operations.

***We may face significant warranty claims.***

All of our equipment and materials are sold with certain warranties. The warranty is typically provided on a repair or replace basis, and is not limited to products or parts manufactured by us. As a result, we bear the risk of warranty claims on all products we supply, including equipment and component parts manufactured by third parties. There can be no assurance that we will be successful in claiming under any warranty or indemnity provided to us by our suppliers or vendors in the event of a

successful warranty claim against us by a customer or that any recovery from such vendor or supplier would be adequate. There is a risk that warranty claims made against us will exceed our warranty reserve and could have a material adverse effect on our financial condition, results of operations, business and/or prospects.

***Exchange rate fluctuations may make our products less attractive to non-U.S. customers and otherwise have a negative impact on our operating results.***

Our reporting currency is the U.S. dollar and almost all of our equipment contracts are denominated in U.S. dollars. However, greater than 98% of our revenue was generated from sales to customers located outside the United States in the nine-month period ended December 31, 2012 and each of the fiscal years ended March 31, 2012 and April 2, 2011, and we expect that a large percentage of our future revenue will continue to be derived from sales to customers located outside the United States. Changes in exchange rates between foreign currencies and the U.S. dollar could make our products less attractive to non-U.S. customers and therefore decrease our sales and gross margins. In addition, we incur costs in the local currency of the countries outside the United States in which we operate and as a result are subject to currency translation risk. Exchange rates between a number of foreign currencies and the U.S. dollar have fluctuated significantly over the last few years and future exchange rate fluctuations may occur. Our largest foreign currency exposure is the Euro. In an attempt to mitigate foreign currency fluctuations, we have entered into, from time to time, forward foreign exchange contracts to hedge portions of equipment purchases from vendors located primarily in Europe. Our hedging activities may not be successful in reducing our exposure to foreign exchange rate fluctuations, for example, in the nine months ended December 31, 2012 we were required to take a charge of \$0.9 million as a result of certain forward foreign exchange contracts no longer qualifying as cash flow hedges, which may occur again if we delay, cancel or otherwise modify the terms of the equipment purchases that affect the forecasted cash flow transaction being hedged. Future exchange rate fluctuations may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

***We have been subject to securities class action lawsuits. Potential similar or related litigation could result in substantial damages and may divert management's time and attention from our business.***

In 2008, the Company, its directors and certain affiliates were defendants in class action suits that alleged certain violations under various sections of the Securities Act of 1933, in connection with our initial public offering. In March 2011, these class actions were settled and we were required to pay \$10.5 million into a settlement fund. Of this amount, we contributed \$1.0 million and our liability insurers contributed the remaining \$9.5 million. Our contribution represented the contractual indemnification obligation to the underwriters.

As a publicly traded company, we may be subject to additional lawsuits relating to violations of the securities laws. Any such litigation would be expensive, time consuming to defend and, if we were unsuccessful in defending such claims, could result in the payments of significant sums. We do maintain insurance, but the coverage may not be sufficient and may not be available in all instances.

***If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, our stockholders could lose confidence in our financial reporting, which could harm our business and the trading price of our common stock.***

We have complied with Section 404 of the Sarbanes-Oxley Act of 2002 by assessing, strengthening and testing our system of internal controls. Even though we concluded our system of internal controls was effective as of December 31, 2012, we need to continue to maintain our processes and systems and adapt them to changes as our business evolves and we acquire new business and technologies. This continuous process of maintaining and adapting our internal controls and complying with Section 404 is

expensive and time-consuming, and requires significant management attention. We cannot be certain that our internal control measures will continue to provide adequate control over our financial processes and reporting and ensure compliance with Section 404. Furthermore, as our business changes and if we expand through acquisitions of other companies or make significant investments in other companies, our internal controls may become more complex and we will require significantly more resources to ensure our internal controls remain effective. In addition, if we reduce a portion of our workforce, as we have done recently, our ability to adequately maintain our internal controls may be adversely impacted. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations. If we or our independent registered public accounting firm identify material weaknesses, the disclosure of that fact, even if quickly remediated, could reduce the market's confidence in our financial statements and harm our stock price.

***Interpretations of existing accounting standards or the application of new standards could affect our revenue recognition and other accounting policies, which could have an adverse effect on the way we report our operating results.***

Generally accepted accounting principles in the United States are subject to interpretations by the Financial Accounting Standards Board, or FASB, the American Institute of Certified Public Accountants, the SEC and various other organizations formed to promulgate and interpret accounting principles. A change in these accounting principles or their interpretations could affect the reporting of transactions that were completed before the announcement of a change in principles or interpretations. In October 2009, the FASB issued authoritative guidance that provides amendments to the revenue recognition criteria for separating consideration in multiple-deliverable revenue arrangements. This guidance prescribes a methodology for determining the fair value, or best estimated selling price, of deliverables on an individual element basis, including elements for which objective reliable evidence of fair value previously did not exist. As noted in Note 2 to our financial statements included elsewhere in this Transition Report on Form 10-K, under the current revenue guidance, for arrangements containing products considered to be "established", the majority of our revenue is recognized upon delivery of the product. For arrangements containing products considered to be "new", or containing customer acceptance provisions that are deemed more than perfunctory, revenue is recorded upon customer acceptance.

If we make incorrect estimates or judgments in applying our revenue recognition policies, for example, if we incorrectly classify a product as "established" when it should have been "new", it may impact the timing of recognizing that revenue and may result in failing to meet guidance provided by us or require that we restate our prior financial statements. Additional errors in applying estimates or judgments in accounting policies may also adversely impact our operating results and may, in certain cases, require us to restate prior financial statements.

***If we are unable to adopt and implement adequate data security procedures, we could lose valuable proprietary information, third parties may be able to access information about the operations of our equipment at customer sites and employee data, any of the foregoing may harm our reputation and our results of operations.***

While we have implemented data security measures, a third party may still gain unauthorized access to our servers, laptops or employee mobile devices. We store our important proprietary information on our servers, including equipment specifications, and our employees may access this data remotely. This information is also shared via e-mail and we rely on industry standard encryption tools for transmitting data (which has been attacked in the past). If a competitor were able to access this information, we would lose the competitive advantages we believe we have and we could also lose the benefits that are or could be realized from our research and development efforts. Access to this



information may be the result of a third-party by-passing our security measures, third-party encryption tools not providing adequate protection or inadvertent error by an employee that results in this information being accessed by unauthorized users.

Some of our servers containing our proprietary and confidential product and customer information are located in foreign jurisdictions, such as China and Hong Kong, and the governments in these jurisdictions may be able to access, review, retain and use the information contained on these servers without any legal recourse on our part or the right to compensation.

In a very limited number of cases, we are able to monitor the operations of our equipment in our customers' facilities. If a third party were able to access this information, they would be able to view important data about the operations of our equipment and use this customer information to their benefit. In addition, it is very likely that our reputation would be harmed among our customers and they could prevent our remote access in the future or even cease purchasing equipment from us.

Finally, we also store financial reporting information and employee data on our computer systems. If our financial information were tampered with, the results we report may not be accurate and/or we may be required to re-state previous released financial results and investors could lose confidence in our reported financial results. If our employee information were accessed, our employees may lose confidence in our operations, we may confront challenges attracting new employees and may face government penalties if we were found to have taken inadequate measures to protect employee information.

***We could be adversely affected by violations of applicable anti-corruption laws or violations of our internal policies designed to ensure ethical business practices.***

We operate in a number of countries throughout the world, including in countries that do not have as strong a commitment to anti-corruption and ethical behavior that is required by U.S. laws or by corporate policies. We are subject to the risk that we, our U.S. employees or our employees located in other jurisdictions or any third parties that we engage to do work on our behalf in foreign countries may take action determined to be in violation of anti-corruption laws in any jurisdiction in which we conduct business, including the U.S. Foreign Corrupt Practices Act of 1977 (or the FCPA). In addition, we operate in certain countries in which the government may take an ownership stake in an enterprise and such government ownership may not be readily apparent (thereby increasing potential FCPA violations). Any violation of the FCPA or any similar anti-corruption law or regulation could result in substantial fines, sanctions, civil and/or criminal penalties and curtailment of operations in certain jurisdictions and might adversely affect our business, results of operations or financial condition. In addition, we have internal ethics policies that we require our employees to comply with in order to ensure that our business is conducted in a manner that our management deems appropriate. If these anti-corruption laws or internal policies were to be violated, our reputation and operations could also be substantially harmed. Further, detecting, investigating, and resolving actual or alleged violations is expensive and can consume significant time and attention of our senior management.

#### **Risks Relating to Our Polysilicon Business**

***The market for polysilicon has been cyclical, resulting in periods of insufficient or excess production capacity and could result in variation in demand for our products.***

The market for polysilicon has been cyclical. In the recent past, polysilicon supply had increased due principally to expansion by existing manufacturers. This factor, among others, resulted in increased supply and declining prices in polysilicon. An excess in production capacity for polysilicon has, and in the future may, adversely affect demand for our SDR reactors. There can be no certainty that the increased demand during the periods of expansion in polysilicon manufacturing capacity will persist for an extended period of time, or at all. A lack of demand for our SDR reactors could have a material adverse effect on our financial condition, results of operations, business and/or prospects. Conversely, if there are shortages of polysilicon in the future, the PV industry may be unable to continue to grow and/or may decline, and, as a result, demand for our PV products may decrease or may be eliminated.

***We license and do not own certain components of the technology underlying our SDR reactor and STC converter products.***

Certain components of the technology underlying our SDR reactor and STC converter products are not owned by us, but are licensed under a ninety-nine year license agreement that could be terminated in the event of a material breach by us of such agreement that remains uncured for more than thirty days, or upon our bankruptcy or insolvency. To the extent such components are deemed to be incorporated into our current or future products, any termination of our rights to use such technology could have a material adverse effect on our ability to offer our polysilicon products and therefore on our financial condition, results of operations, business and/or prospects if we were unable to secure these rights in a different manner or from an alternative arrangement.

#### **Risks Relating to Our Photovoltaic Business**

***We intend to discontinue investment in our DSS product line and, as a result, do not expect our PV segment to contribute any material revenues to our business until the HiCz equipment offering, which is still under development is released.***

Our principal product line of our PV business has been the DSS family of casting furnaces that are used to produce multicrystalline ingots and MonoCast™ ingots. Because of the high level of PV manufacturing overcapacity, we expect very limited investment in additional current generation capital equipment for 2013 and beyond. As such, we intend to discontinue any significant investment in our DSS product line. We will endeavor to sell any DSS furnaces that we have in our inventory, but expect that demand for these will be limited. Our next generation PV equipment offering, our HiCz™ tool, is still under development and is projected to be commercially available in 2014. Until the HiCz™ equipment tool is released and gains commercial acceptance, we do not expect our PV business segment to make any meaningful to our overall revenues. Since the HiCz equipment offering is still under development, however, the timing of a commercial release and the revenue from sales of the tool, if any, are uncertain. If there is a delay in the release of the HiCz™ tool or it does not gain acceptance among PV manufacturers, our PV segment and our overall business will be materially and adversely effected.

***Government subsidies and economic incentives for on-grid solar electricity applications could be reduced or eliminated.***

Demand for PV equipment, including on-grid applications, has historically been dependent in part on the availability and size of government subsidies and economic incentives. Currently, the cost of solar electricity exceeds the retail price of electricity in most major markets in the world. As a result, federal, state and local governmental bodies in many countries, most notably Germany, Italy, Spain, South Korea, Japan, China and the United States, have provided subsidies in the form of feed-in tariffs, rebates, tax write-offs and other incentives to end-users, distributors, systems integrators and/or manufacturers of PV products to promote the use of solar energy in on-grid applications and to reduce dependency on other forms of energy. Many of these government incentives have expired or are due to expire in time, phase out over time, cease upon exhaustion of the allocated funding and/or are subject to cancellation or non-renewal by the applicable authority. The reduction, expiration or elimination of relevant government subsidies or other economic incentives may result in the diminished competitiveness of solar energy relative to conventional and other renewable sources of energy, and adversely affect demand for PV equipment (and polysilicon equipment) or result in increased price competition, all of which could cause our sales and revenue to decline and have a material adverse effect on our financial condition, results of operations, business and/or prospects. Further, any government subsidies and economic incentives could be reduced or eliminated altogether at any time and for any reason. We believe that government subsidies and incentives will be eliminated in the near future. Also, relevant statutes or regulations may be found to be anti-competitive, unconstitutional or

may be amended or discontinued for other reasons. Some government subsidies and incentives have been subject to challenge in courts in certain foreign jurisdictions. New proceedings challenging minimum price regulations or other government incentives in other countries in which we conduct our business or in which our customers conduct business, may be initiated, and if successful, could cause a decrease in demand for our products.

***Existing regulations and policies and changes to these regulations and policies may present technical, regulatory and economic barriers to the purchase and use of photovoltaic products.***

The market for electricity generation products is heavily influenced by government regulations and policies concerning the electric utility industry, as well as policies promulgated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of user-owned electricity generation. In the United States and in a number of other countries, these regulations and policies are currently being modified and may be modified again in the future. These regulations and policies could deter end-user purchases of PV products (and polysilicon products) and investment in the research and development of PV technology. For example, without a mandated regulatory exception for PV systems, utility customers are often charged interconnection or standby fees for putting distributed power generation on the electric utility grid. These fees could increase the cost to end-users of PV systems and make such systems less attractive to potential customers, which may have a material adverse effect on demand for our polysilicon and PV products and our financial condition, results of operations, business and/or prospects.

***The photovoltaic industry may not be able to compete successfully with conventional power generation or other sources of renewable energy.***

Although the PV industry has experienced advances in recent years, it still comprises a relatively small component of the total power generation market and competes with other sources of renewable energy, as well as conventional power generation. Many factors may affect the viability of widespread adoption of PV technology and thus demand for solar wafer manufacturing equipment, including the following:

- cost-effectiveness of solar energy compared to conventional power generation and other renewable energy sources;
- performance and reliability of solar modules compared to conventional power generation and other renewable energy sources and products;
- availability and size of government subsidies and incentives to support the development of the solar energy industry;
- success of other renewable energy generation technologies such as hydroelectric, wind, geothermal and biomass; and
- fluctuations in economic and market conditions that affect the viability of conventional power generation and other renewable energy sources, such as increases or decreases in the prices of oil, natural gas and other fossil fuels.

As a result of any of the foregoing factors, our financial condition, results of operations, business and/or prospects could be materially adversely affected.

## **Risks Relating to Our Sapphire Business**

*If our sapphire equipment and material do not achieve market acceptance, prospects for our sapphire business would be limited.*

The customers to whom we sell ASF systems are, we believe, largely manufacturing for the LED industry and, in more limited cases, other industrial markets. Potential customers for sapphire equipment and sapphire-based LED materials manufactured with the ASF system may be reluctant to adopt these offerings as an alternative to existing sapphire materials and lighting technology or sapphire manufacturing processes. In addition, many of the customers who purchase our equipment, we believe, will utilize the material for LED lighting. However, LED lighting is currently more expensive than traditional lighting and if the price does not decrease in the near future, our customers may not have a market in the near term for the material they produce with our ASF systems, which would reduce the demand for our ASF systems.

In addition, potential customers may have substantial investments and know-how related to their existing sapphire, LED and lighting technologies, and may perceive risks relating to the complexity, reliability, quality, usefulness and cost-effectiveness of our sapphire equipment and sapphire material products compared to alternative products and technologies available in the market or that are currently under development. For example, companies are developing general lighting technologies that utilize silicon-based material (in lieu of sapphire) and assert that the production costs are significantly lower than the costs to produce sapphire-based lighting materials. If acceptance of sapphire material and sapphire-based LEDs, particularly in general illumination, do not increase significantly, opportunities to increase the sapphire equipment portion of our business and revenues would be limited.

In addition, the price of sapphire-based LED material has recently experienced a marked drop due, in part, to the readily available supply of such material. If the price of LED material, which is driven, in large part due to the supply that is generally available, drops, we would expect that our materials and equipment business would be negatively impacted.

Any of the foregoing factors could have an adverse impact on the growth of the sapphire portion of our business and the recoverability of our investment in Crystal Systems. Historically, the sapphire industry has experienced volatility in product demand and pricing. Changes in average selling prices of sapphire material as a result of competitive pricing pressures, availability of material, increased sales discounts and new product introductions by competitors could have an adverse impact on our results of operations.

*Our efforts to expand the use of sapphire into other applications may not be successful and may not produce revenue in the future.*

We have recently undertaken efforts to broaden the use of sapphire to applications beyond LED. For example, sapphire has qualities that we believe may make it suitable for use in industrial applications and consumer electronics (including mobile devices). These efforts, however, are only in the early stages, with only one customer, we believe, purchasing ASF systems in order to supply sapphire for use in mobile consumer devices. Our efforts to gain market acceptance for the use of sapphire in these other markets may not be successful. If so, we may expend financial resources and management time without generating a meaningful amount of revenue. In addition, our stock price may be adversely impacted if investors expect that the industrial or mobile device market represents a significant opportunity and sapphire (or sapphire from the ASF system) does not meet their expectation.

***Crystal growth using the ASF system requires a consistent supply of power and any interruption in the supply of power may result in sapphire material that has reduced or no sales value.***

The process for growing sapphire boules using the ASF system technology requires that the system be supplied with a consistent supply of power during the cycle required to grow a boule. If there are certain types of power interruptions, which we have experienced at our Salem and Merrimack facilities, even for a brief period of time, the sapphire boule being generated by that system will be of inferior quality and we would likely be unable to sell that sapphire material to a customer. Such power interruptions at our facilities also delay and impair our research and development efforts with respect to sapphire material and ASF systems. In addition, if customers of our ASF system do not have consistent power supplies, our system would not gain market acceptance because it will not create boules of the quality that may be expected by our customers and we would likely not meet the required contractual criteria necessary to receive the final installment payment.

***Production and sale of sapphire growth systems for producing materials for the LED and other industries is a new industry and we have limited operating history, which makes it difficult to evaluate the business prospects for this business segment.***

Because of our limited operating history in the sapphire industry it is difficult to evaluate our business and prospects. While we have gained contractual acceptances on our ASF systems, our sapphire equipment business, however, presents the difficulties frequently encountered by those businesses that are in the early stage of development, coupled with the risks and uncertainties encountered in new and evolving markets such as the market for sapphire growth technology. We may not be able to successfully address these challenges. If we fail to do so, we may incur losses and our business would be negatively impacted.

While we have commissioned ASF systems at customer sites, our customers generally lack experience in operating the ASF systems. Our sapphire furnaces require a skilled and trained employee base to properly operate and efficiently maintain the systems. While we offer training in connection with the sale of ASF systems, at certain customer sites, we have discovered that those customers have not yet hired the personnel or instituted the operations procedures necessary to properly run the ASF system they purchased. As a result of these factors, we believe that certain ASF systems have generated sapphire material that is not salable. Additionally, even in those cases where the sapphire boule was to specification, the boule has not always been properly oriented by the customer and some or all of the value of the sapphire boule was lost as it was sliced and cored. If our customers do not have the manufacturing expertise to operate the ASF systems, they may be delayed in ramping up their operations and sapphire manufacturing operations, we may not recognize revenue from the sale of these systems (or such recognition may be delayed) and the ASF systems may not gain wider market acceptance, all of which would harm our reputation and the results of our sapphire business segment.

#### **Risks Relating to Our Common Stock**

***Future sales of our common stock, or the perception in the public markets that these sales may occur, could depress our stock price.***

Future sales of substantial amounts of our common stock in the public market or the perception that these sales could occur, could adversely affect the price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. In addition, future equity financings could also result in dilution to our stockholders and new securities could have rights, preferences and privileges that are senior to those of our common shares.

Our certificate of incorporation currently authorizes us to issue up to 500 million shares of common stock, and as of December 31, 2012, we had approximately 119 million shares of common stock outstanding. All of these shares are freely tradable, in the public market under a registration

statement or an exemption under the securities laws. Moreover, as of December 31, 2012, 10.1 million shares of our common stock were issuable upon the exercise of outstanding vested and unvested options and upon vesting of outstanding restricted stock units.

***Our certificate of incorporation and by-laws contain provisions that could discourage another company from acquiring us and may prevent attempts by our stockholders to replace or remove our current management.***

As a result of our stock price, it is possible that companies in our industries or certain other investors may consider making a friendly or hostile attempt to gain control of a majority (or all) of our common stock. Some provisions of our certificate of incorporation and by-laws may have the effect of delaying, discouraging or preventing a merger or acquisition that our stockholders may consider favorable, including transactions in which stockholders may receive a premium for their shares. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace or remove our board of directors. These provisions include:

- the removal of directors only by the affirmative vote of the holders of two-thirds of the shares of our capital stock entitled to vote;
- any vacancy on our board of directors, however occurring, including a vacancy resulting from an enlargement of the board, may only be filled by vote of the directors then in office;
- inability of stockholders to call special meetings of stockholders or take action by written consent;
- advance notice requirements for board nominations and proposing matters to be acted on by stockholders at stockholder meetings; and
- authorization of the issuance of “blank check” preferred stock without the need for action by stockholders.

***We are a technology-oriented company and, as such, we expect that the price of our common stock may fluctuate substantially.***

We operate in industries where there are rapid changes in technologies and product offerings. Broad market, industry and economic factors may adversely affect the market price of our common stock, regardless of our actual operating performance. Factors that could cause fluctuations in our stock price may include, among other things:

- actual or anticipated variations in quarterly operating results;
- changes in market prices for our products or for raw materials;
- changes in our financial guidance or estimates made by us or by any securities analysts who may cover our stock or our failure to meet the estimates made by securities analysts;
- changes in the market valuations of other companies operating in our industry;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, divestitures or significant contracts;
- changes in governmental policies with respect to energy;
- additions or departures of key personnel; and
- sales of our common stock, including sales of our common stock by our directors and officers or by our larger stockholders.

***Announcements of contract awards or bankruptcies of solar-related companies could have a significant impact on our stock price.***

It is common for equipment manufacturers in the business segments in which we operate to enter into contracts for the sale and delivery of substantial amounts of equipment, involving highly competitive bidding situations. Public announcements of contract awards often cause a reaction in the stock market and affect, sometimes significantly, the trading price of the stock of the manufacturer that received a contract award. It could also have a negative effect on the trading price of stock of competitors that did not receive such contract. This reaction may be unrelated to the historical results of operations or financial condition of the affected companies or, in the case of unsuccessful competitors, any guidance they may have provided with respect to their future financial results. An announcement that a competitor of ours was awarded a significant customer contract could have a material adverse effect on the trading price of our stock.

In addition, there have been several recent announcements that companies offering solar power related services and materials have filed or will file for bankruptcy. For example, Solyndra filed for bankruptcy in August 2011. Such announcements, and future similar announcements, will likely have a negative effect on the trading price of our stock. This will likely be the case even if such companies do not utilize the output for the equipment we sell.

***Our quarterly operating results have fluctuated significantly in the past and we expect that our quarterly results will continue to fluctuate significantly in the future.***

Our quarterly operating results have fluctuated significantly in the past and we expect that our quarterly results will continue to fluctuate significantly in the future. Future quarterly fluctuations may result from a number of factors, including:

- the size of new contracts and when we are able to recognize the related revenue, especially with respect to our polysilicon products;
- requests for delays in deliveries by our customers;
- delays in customer acceptances of our products;
- delays in deliveries from our vendors;
- our rate of progress in the fulfillment of our obligations under our contracts;
- the degree of market acceptance of our products and service offerings;
- the mix of products and services sold;
- budgeting cycles of our customers;
- product lifecycles;
- changes in demand for our products and services;
- the level and timing of expenses for product development and sales, general and administrative expenses;
- competition by existing and emerging competitors, including in the PV, polysilicon and sapphire industry;
- announcements by our competitors or customers of the awarding of a significant contract;
- termination of or removal of contracts in our reported order backlog;
- our success in developing and selling new products and services, controlling costs, attracting and retaining qualified personnel;



- changes in government subsidies and economic incentives for on-grid solar electricity applications;
- announcements regarding litigation or claims against us or others in the PV, polysilicon or sapphire industries;
- changes in export licensing or export restrictions with respect to our products;
- changes in our strategy;
- negative announcements regarding solar and sapphire industry participants, such as the bankruptcies of Evergreen Solar and Solyndra, as well as government investigations of Solyndra operations;
- foreign exchange fluctuations; and
- general economic conditions.

Based on these factors, we believe our future operating results will vary significantly from quarter-to-quarter and year-to-year. As a result, quarter-to-quarter and year-to-year comparisons of operating results are not necessarily meaningful nor do they indicate what our future performance will be.

*Hedging activity and sales of our common stock related to the Mandatorily Exchangeable Notes issued by UBS AG, our 3.00% Convertible Notes, the Convertible Note Hedge and Warrants entered into in connection with the 3.00% Convertible Notes and/or the expectation of distribution of our common stock at maturity of the Exchangeable Notes, 3.00% Convertible Notes or the Exercise of the Warrants could depress our stock price.*

During September 2010, UBS AG sold its Mandatorily Exchangeable Notes due 2013, or the exchangeable notes, pursuant to which UBS AG will deliver to holders of the exchangeable notes at maturity up to 17.5 million shares of our common stock or the value of such shares in cash, or a combination of cash and shares, based on a formula linked to the price of our common stock. In connection with the issuance by UBS AG of its exchangeable notes, GT Solar Holdings, LLC (a former significant shareholder of the Company) sold an aggregate of 14.0 million shares of our common stock to UBS Securities LLC, an affiliate of UBS AG. We understand that UBS AG and one or more of its affiliates have entered into and/or are expected to enter into hedging arrangements related to UBS AG's obligations under the exchangeable notes. This hedging activity will likely involve trading in our common stock or in other instruments, such as options or swaps, based upon our common stock, and may include sales of common stock acquired by an affiliate of UBS AG upon early exchange of exchangeable notes.

In September 2012, we issued \$220 million aggregate principal amount of 3.00% Convertible Senior Notes due 2017. Upon conversion of these Notes, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. The Notes may be converted, under certain conditions specified in the Indenture entered into in connection with the issuance of the Notes, based on an initial conversion rate of 129.7185 shares of common stock per \$1,000 principal amount of Notes (which represents an initial effective conversion price of the Notes of \$7.71 per share), subject to adjustment as described in the Indenture. It is likely that the some or all of the holders of the Notes will enter into hedging arrangements that involves trading in our common stock or in other instruments, such as options or swaps, based upon our common stock.

In connection with issuing the Notes, we entered into convertible note hedge transactions with certain option counterparties. The convertible note hedge transactions are expected to reduce the potential dilution and/or offset any cash payments we are required to make in excess of the principal

amount upon conversion of the Notes. We also entered into warrant transactions with the option counterparties. We believe that the option counterparties or their affiliates entered into various derivative transactions with respect to our common stock concurrently with or shortly after the pricing of the Notes. The option counterparties or their affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the Notes (and are likely to do so during any “observation period” related to a conversion of Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock. In addition, if any such convertible note hedge and warrant transaction is exercised or unwound early or any such warrant transaction is unwound early, such action could adversely affect the value of our common stock.

All of the foregoing hedging activity could affect our stock price, including by depressing it. Also, the price of our common stock could be depressed by possible sales of our common stock by investors who view the Exchangeable Notes or Notes as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that we expect to occur involving our common stock by investors in the Exchangeable Notes and the Notes. Our stock price could become more volatile and could be depressed by investors’ anticipation of the potential distribution into the market of substantial additional amounts of our common stock at the maturity of the Exchangeable Notes and the Notes or at the time of exercise of the warrants.

***We currently do not intend to pay dividends on our common stock and as a result, the only opportunity to achieve a return on an investment in our common stock is if the price appreciates.***

We currently do not expect to declare or pay dividends on our common stock in the foreseeable future. In addition, our credit agreement with Bank of America, N.A., which we entered into in January 2012, restricts our right to declare or make any dividends, subject to certain exceptions. As a result, the only opportunity to achieve a return on an investment in our common stock will be if the market price of our common stock appreciates and the shares are sold at a profit. We cannot assure our investors that the market price for our common stock will ever exceed the price that was paid.

***Our actual operating results may differ significantly from our guidance.***

From time to time, we release guidance in our quarterly or annual earnings releases, quarterly or annual earnings conference call or otherwise, regarding our future performance that represent our management’s estimates as of the date of release. This guidance, which includes forward-looking statements, is based on projections prepared by our management. These projections are not prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our registered public accountants nor any other independent expert or outside party compiles or examines the projections and, accordingly, no such person expresses any opinion or any other form of assurance with respect thereto.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. We generally state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed but are not intended to represent that actual results could not fall outside of the suggested ranges. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by any such persons. Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions of the guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our

guidance is only an estimate of what management believes is realizable as of the date of release. Actual results will vary from our guidance and the variations may be material. In light of the foregoing, investors are urged not to rely upon, or otherwise consider, our guidance in making an investment decision in respect of our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in our "Risk Factors" in this Transition Report on Form 10-K could result in the actual operating results being different from our guidance, and such differences may be adverse and material.

**Item 1B. *Unresolved Staff Comments***

None.

**Item 2. *Properties***

We lease our corporate headquarters, which is located in Nashua, New Hampshire. The Nashua headquarters is approximately 24,000 square feet and is utilized for certain general corporate, finance and administrative functions that support all of our business segments. We also own our facility located in Merrimack, New Hampshire. This facility has approximately 106,000 square feet, and includes an advanced manufacturing center, as well as administrative, product development, sales, marketing and customer service facilities. Our manufacturing facility in Merrimack, New Hampshire is equipped with advanced CAD software, computers and plotters for mechanical and electrical designs. We also own several additional acres of undeveloped land adjacent to our Merrimack facility, which could be used to accommodate future growth, if necessary. Our Merrimack, New Hampshire facility and the land on which it is located are subject to a lien pursuant to the Credit Agreement we entered into in January 2012 with Bank of America N.A. (and certain other lenders).

In order to better serve our customers in Asia, we have a global operations center located in Hong Kong.

In total, we conduct our operations through (i) one facility we own in Merrimack, New Hampshire and (ii) various leased facilities described in the table below. Certain information regarding our leased facilities is set forth below:

<u>Location</u>	<u>Approximate Size</u>	<u>Expiration Date</u>	<u>Principal Function</u>	<u>Business Segment Utilizing Facility</u>
Missoula, Montana . . . . .	14,744 sq. ft.	January 2015	Office facility	Polysilicon
Missoula, Montana . . . . .	11,937 sq. ft.	December 2014	Warehousing, testing, research and development	Polysilicon
Nashua, New Hampshire . . . . .	24,080 sq. ft.	January 2014	Office facility	General Corporate
Salem, Massachusetts . . . . .	109,324 sq. ft.	July 2023	Pilot production operations, office facilities and warehousing	Sapphire
Danvers, Massachusetts . . . . .	18,599 sq. ft.	January 2015	Pilot production operations, research and development warehousing	PV
Hazelwood, Missouri . . . . .	68,420 sq. ft.	July 2020	Office facility, operations, warehouse	PV (HiCz)
Shanghai, China . . . . .	50,000 sq. ft.	September 2013	Light manufacturing, warehouse, offices	Polysilicon/PV/Sapphire/General Corporate
Shanghai, China . . . . .	11,613 sq. ft.	February 2014	Office facility	General Corporate
Chupei City, Taiwan . . . . .	2,776 sq. ft.	July 2015	Office facility	Polysilicon/PV/Sapphire/General Corporate
Chupei City, Taiwan . . . . .	3,188 sq. ft.	October 2014	Office facility, warehouse	Polysilicon/PV/Sapphire
Hong Kong . . . . .	17,751 sq. ft.	January 2015	Office facility	Polysilicon/PV/Sapphire/General Corporate

**Item 3. *Legal Proceedings***

We are not subject to any material pending legal proceedings. We are, however, subject to various routine legal proceedings and claims incidental to our business which we believe will not have a material adverse impact on our financial position, results of operations and cash flows.

**Item 4. *Mine Safety Disclosure***

Not applicable.

## PART II

### Item 5. *Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

#### Price Range of Common Stock

Our common stock was listed on The NASDAQ Global Select Market under the symbol "SOLR" beginning July 24, 2008. Prior to July 24, 2008, there was no public market for our common stock. In August 2011, we changed our name to GT Advanced Technologies Inc. In connection with this name change, we also changed our ticker symbol on The NASDAQ Global Select Market to "GTAT." The following table sets forth the range of high and low sales prices per share as reported on The NASDAQ Global Select Market for the periods indicated.

	<u>High</u>	<u>Low</u>
<b>Nine-Month Period Ended December 31, 2012</b>		
Third Quarter .....	\$ 5.35	\$2.86
Second Quarter .....	\$ 6.94	\$4.76
First Quarter .....	\$ 8.38	\$4.05
<b>Fiscal 2012</b>		
Fourth Quarter .....	\$ 9.89	\$7.30
Third Quarter .....	\$ 9.21	\$6.40
Second Quarter .....	\$17.50	\$6.80
First Quarter .....	\$16.40	\$9.07

The closing sales price of our common stock on The NASDAQ Global Select Market was \$3.15 per share on February 22, 2013. As of February 22, 2013 there were approximately 23 record holders of our common stock. Because many of our shares are held of record by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

#### Dividend Policy

We do not intend to pay any dividends on our common stock for the foreseeable future. The Credit Agreement that we entered into with Bank of America N.A (and certain other lenders) on January 31, 2012 imposes restrictions on our ability, and the ability of our subsidiaries, to pay cash dividends, subject to certain limited exceptions.

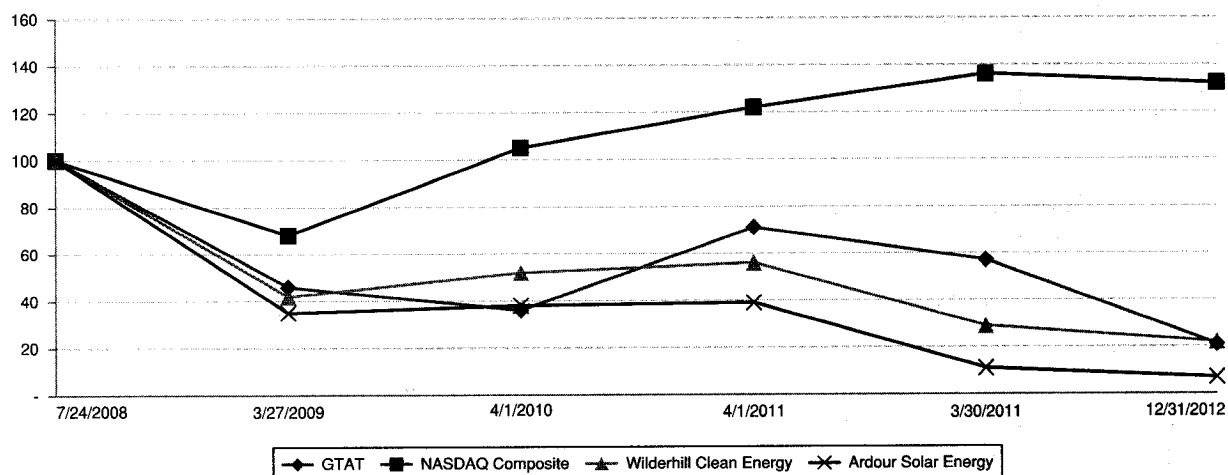
#### Stock Price Performance Graph

Our management has decided to adopt a new industry peer group for use in our performance graph. We believe that the service offerings of the new industry peer group is more similar to those offered by the Company and that they more closely compete with the Company and its three business segments. Whereas the Ardour Solar Energy Index consisted of companies operating almost exclusively in the solar industry, our new peer group index, Wilderhill Clean Energy Index, consists of companies in the solar, sapphire (or LED) and polysilicon industries.

Therefore, the following graph compares the cumulative return attained by shareholders on our common stock since July 24, 2008 through December 31, 2012 (the end of the nine-month transition period covered by this Transition Report on Form 10-K) relative to the cumulative total returns of the NASDAQ Composite Index, the Ardour Solar Energy Index and the Wilderhill Clean Energy Index. The Ardour Solar Energy Index is the original index used by the Company and, as noted above, is being replaced by a new peer group index. The Wilderhill Clean Energy Index ("New Peer Group Index") will be used going forward. This being the first year we are using the Wilderhill Clean Energy

Index, Ardour Solar Energy Index will be used in the performance graph for purposes of comparison. Going forward, only the Wilderhill Clean Energy Index will be used in the performance graph.

For the purposes of this performance graph, an investment of \$100 (with reinvestment of all dividends) is assumed to have been made in our common stock and in each index on July 24, 2008 and its relative performance is tracked through December 31, 2012. No cash dividends have been declared on shares of our common stock since July 24, 2008, the date our shares commenced trading. This performance graph is not “soliciting material,” is not deemed filed with the SEC and is not to be incorporated by reference in any filing by us under the Securities Act of 1933, as amended (the “Securities Act”), or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. The stock price performance shown on the graph represents past performance and should not be considered an indication of future price performance.



	<u>7/24/2008*</u>	<u>3/27/2009</u>	<u>4/1/2010</u>	<u>4/1/2011</u>	<u>3/30/2012</u>	<u>12/31/2012</u>
GT Advanced Technologies Inc. . . . .	100.00	45.51	35.71	71.35	56.68	20.77
Ardour Solar Energy Index(1) . . . . .	100.00	34.92	37.98	38.93	11.06	7.22
Wilderhill Clean Energy Index(2) . . . . .	100.00	42.34	52.18	56.03	29.46	21.93
NASDAQ Composite . . . . .	100.00	67.77	105.37	122.34	135.59	132.43

\* \$100 invested on July 24, 2008 in stock and in index, including, for purposes of each index, reinvestment of dividends.

Note:

- (1) GT Advanced Technologies Inc. total return based upon \$14.59 per share price at close of first day trading. The initial public offering price was \$16.50 per share.
- (2) The Ardour Solar Energy Index is a rules-based, modified global-capitalization-weighted, float-adjusted index consisting of companies engaged in solar power and related products and services with market capitalization exceeding \$100 million and average three months trading volumes equal to or greater than \$1 million a day.
- (3) The Wilderhill Clean Energy Index consists of companies that focus on the technologies for utilizing greener, renewable sources of energy. These technologies include renewable energy harvesting or production, energy conversion, energy storage, pollution prevention, improving efficiency, power delivery, energy conservation, and monitoring information. In addition, the companies included in the Wilderhill Clean Energy Index generally have market capitalizations of \$200 million or higher.

### Purchases of Equity Securities by the Issuer and Affiliate Purchases

The following table sets forth information in connection with purchases made by, or on behalf of, us or any affiliated purchaser, of shares of our common stock during the three months ended December 31, 2012:

	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
Month ended November 3, 2012 .	38,911	\$5.11		
Month ended December 1, 2012 .	83,157	\$3.96		
Month ended December 31, 2012 .	37,727	\$3.54		\$25,000,000

We did not repurchase any of our common stock on the open market as part of a stock repurchase program during the nine months ended December 31, 2012; however, our employees surrendered, and we subsequently retired, 346,133 shares of our common stock to satisfy the tax withholding obligations on the vesting of restricted stock unit awards issued under our equity incentive plans.

On November 16, 2011, our board of directors authorized a \$100 million share repurchase plan. Of this amount, we repurchased \$75 million during the fiscal year ended March 31, 2012. Under this repurchase plan, we may purchase up to an additional \$25 million of our common stock.

Our credit facility imposes restrictions on our ability, and the ability of our subsidiaries, to pay cash dividends and restrictions on our right to repurchase shares of our common stock, subject in each case to certain limited exceptions.

### Item 6. Selected Consolidated Financial Data

The following selected consolidated financial data should be read together with “Item 7. Management’s Discussion and Analysis of Financial Conditions and Results of Operations” and our consolidated financial statements and the accompanying notes thereto included elsewhere in this Transition Report on Form 10-K. The consolidated statement of operations and balance sheet data for all periods presented is derived from the audited consolidated financial statements included elsewhere in this Transition Report on Form 10-K or in Annual Reports on Form 10-K for prior years on file with the Securities and Exchange Commission.



Our reporting period was previously based on a 52-week year that ends on the Saturday closest to March 31, which in our fiscal year ended April 3, 2010 resulted in a 53-week fiscal year. On April 16, 2012, the board of directors of the Company voted to amend the Company's amended and restated by laws to provide that the Company's fiscal year will end on December 31 of each year. Prior to this amendment, the Company's by-laws had provided that fiscal years ended on the Saturday closest to March 31st of each year. As a result of this change to the fiscal year end, the Company reports a nine-month transition period consisting of the period from April 1, 2012 to December 31, 2012, and the 2013 fiscal year will begin on January 1, 2013 and end on December 31, 2013.

**GT Advanced Technologies, Inc.**

	<b>Nine-Month Period Ended December 31, 2012</b>	<b>Fiscal Year Ended March 31, 2012</b>	<b>Fiscal Year Ended April 2, 2011</b>	<b>Fiscal Year Ended April 3 2010</b>	<b>Fiscal Year Ended March 28, 2009</b>
<b>Statement of Operations Data:</b>					
Revenue	\$ 379,646	\$ 955,705	\$ 898,984	\$544,245	\$541,027
Cost of revenue(1)	325,570	528,905	520,989	325,263	326,358
Gross profit	54,076	426,800	377,995	218,982	214,669
Research and development	55,401	49,872	23,753	21,410	18,323
Selling and marketing	12,408	19,763	19,792	11,823	17,469
General and administrative	44,362	64,117	54,386	38,623	32,228
Contingent consideration expense (income)(2)	(9,492)	4,458	2,262	—	—
Impairment of goodwill(3)	57,037	—	—	—	—
Restructuring charges and asset impairments(4)	33,441	—	—	—	—
Amortization of intangible assets	7,619	8,198	4,500	3,164	3,105
(Loss) income from operations	(146,700)	280,392	273,302	143,962	143,544
Interest income	164	468	603	420	2,996
Interest expense(5)	(8,556)	(12,980)	(2,923)	(1,383)	1,652
Other, net(6)	(950)	2,058	(384)	(3,125)	(6,012)
(Loss) income before income taxes	(156,042)	269,938	270,598	139,874	142,180
(Benefit) provision for income taxes	(13,734)	86,541	95,843	52,618	54,212
Net (loss) income	\$ (142,308)	\$ 183,397	\$ 174,755	\$ 87,256	\$ 87,968
<b>(Loss) income per Common Share:</b>					
Basic	\$ (1.20)	\$ 1.48	\$ 1.26	\$ 0.61	\$ 0.62
Diluted	(1.20)	1.45	1.24	0.60	0.61
<b>Weighted-average shares used to compute (loss) income per Common Share:</b>					
Basic	118,776	123,924	138,673	143,409	142,582
Diluted	118,776	126,051	140,902	145,390	144,471
Dividends paid per common share	\$ —	\$ —	\$ —	\$ —	\$ 0.63
<b>Balance Sheet Data (at end of period):</b>					
Cash and cash equivalents	\$ 418,095	\$ 350,903	\$ 362,749	\$230,748	\$107,148
Short-term investments	—	—	—	19,967	—
Deferred revenue	121,946	196,159	445,517	334,347	348,127
Working capital(7)	369,373	186,415	282,824	177,150	57,672
Total assets	1,002,782	1,132,590	1,126,292	732,081	737,423
Total debt(8)	297,003	75,000	120,313	—	—
Stockholders' equity	242,251	331,554	201,940	178,986	81,905
<b>Cash Flow Data:</b>					
<b>Cash provided by (used in):</b>					
Operating activities	\$ (151,478)	\$ 217,673	\$ 251,774	\$147,276	\$152,872
Investing activities	(35,176)	(107,983)	(34,033)	(24,540)	(10,959)
Financing activities	253,778	(121,643)	(85,948)	863	(89,614)
Other	68	107	208	1	10
Increase (decrease) in cash and cash equivalents	\$ 67,192	\$ (11,846)	\$ 132,001	\$123,600	\$ 52,309
<b>Other Financial Data:</b>					
Depreciation and amortization	\$ 22,719	\$ 17,848	\$ 9,667	\$ 6,870	\$ 5,111
Capital expenditures paid in cash	25,167	48,152	31,263	4,573	10,509

- (1) During the nine-month period ended December 31, 2012, the solar industry continued to face increasing challenges in photovoltaic market overcapacity and weaker operating performance and outlook, leading to the deterioration of the solar equipment market and the Company's customers' financial condition, coupled with lower market valuations. The Company concluded that these factors have significantly decreased the demand for our DSS products. The Company considered the impact of these industry circumstances on its balance of DSS inventory and determined that there was inventory in excess

of forecasted demand for the next 12 months. As a result of these market conditions, during the three months ended December 31, 2012, the Company incurred charges of \$60.2 million to record PV inventory at its net realizable value, which considers the Company's estimate of forecasted sales of units and selling prices. Additionally, the Company recorded charges of \$8.4 million in cost of sales, in connection with amounts that had been advanced to our vendors for production of certain PV inventory.

- (2) During the nine-month period ended December 31, 2012, based on the failure to satisfy certain operational and technical targets by the contractual target dates, the Company determined that the contingent consideration opportunities related to these targets in connection with the acquisition of Confluence Solar were not achieved and the Company recognized a total decrease in the fair value of contingent consideration of \$8,177 in the condensed consolidated statements of operations. In addition, the Company recorded contingent consideration income of \$1,611 in connection with a change in probabilities of the remaining contingent consideration targets in connection with the acquisition of Confluence Solar.
- (3) During the three-month period ended December 31, 2012, the Company recorded a charge for the impairment of goodwill in our PV business of \$57.0 million. This impairment was the result of an interim impairment analysis performed as of December 31, 2012 and reflects the fact that the solar industry faced increasing challenges including overcapacity in the markets the Company serves and weaker operating performance and outlook, leading to the deterioration of the solar equipment market and the Company's customers' financial condition, coupled with lower market valuations. Refer to the notes of our consolidated financial statements for additional information.
- (4) As part of a program to reduce costs and increase operational efficiencies, the Company announced, on October 31, 2012, a plan to streamline worldwide operations to better align its cost structure with current market conditions and enhance its ability to pursue strategic growth initiatives. The Company began recording these restructuring charges during the three-month period ended December 31, 2012 and expects that the remainder will be recorded during fiscal 2013. In addition, on January 10, 2013, the Company announced its plan to cease operations at its Hazelwood, Missouri facility ("Hazelwood Facility"). The idling of the Hazelwood Facility is part of the Company's effort to reduce costs and optimize its R&D activities and is expected to be completed on or before March 31, 2013. The Company determined that as of December 31, 2012 it was probable that employees would be entitled to receive benefits associated with the plant idling and that these amounts were estimable. As such, the expenses associated with the plant idling of \$29.8 million have been included as expense for the nine-month period ended December 31, 2012.
- (5) For the fiscal year ended March 31, 2012, we incurred interest expense in connection with the credit facility we entered into with Bank of America N.A. (and certain other lenders) on January 31, 2012. In addition, during the fiscal year ended March 31, 2012, we recorded interest expense of \$6.1 million related to the recognition of unamortized deferred financing costs in connection with terminating our credit facility with Credit Suisse that we entered into on December 13, 2010. For the fiscal year ended April 2, 2011, we incurred interest expense in connection with our credit facility with Credit Suisse, as well as the amortization of deferred financing costs in connection with this credit facility. On September 28, 2012, the Company issued \$220.0 million aggregate principal amount of 3.00% Convertible Senior Notes due 2017 (the "Notes"). The net proceeds from the issuance of the Notes were approximately \$212.6 million, after deducting fees paid to the initial purchasers and other offering costs. The Notes are senior unsecured obligations of the Company, which pay interest in cash semi-annually (on April 1 and October 1 of each year) at a rate of 3.00% per annum beginning on April 1, 2013. The Notes are governed by an Indenture dated September 28, 2012 with U.S. Bank National Association, as trustee (the "Indenture"). The Notes are not redeemable by the Company. The effective interest rate on the Notes as of December 31, 2012 was 10.7%.
- (6) For the fiscal year ended March 31, 2008, other expense includes \$1.6 million of costs related to our initial public offering. For the fiscal year ended March 28, 2009, other expense includes \$2.6 million of costs related to our initial public offering and \$3.0 million attributed to the ineffective portion of certain forward foreign exchange contracts. For the fiscal years ended March 31, 2012 and April 3, 2010, other expense includes \$1.4 million and \$2.1 million, respectively, attributed to the ineffective portion of certain forward foreign exchange contracts. In addition, for the fiscal year ended March 31, 2012, other income includes a gain on fair value adjustment of \$3.4 million in connection with our accelerated share repurchase program.
- (7) Working capital represents current assets minus current liabilities.
- (8) On December 13, 2010, we entered into a credit agreement with Credit Suisse AG which consisted of a term facility in an aggregate maximum amount of \$125.0 million with a final maturity date on December 13, 2013, and a revolving credit facility, in an aggregate principal amount of \$75.0 million with a final maturity date on December 13, 2013. The full amount of the term facility was drawn by us on December 13, 2010. We terminated this facility with Credit Suisse in November 2011. On January 31, 2012, we entered into a new credit agreement, with Bank of America, N.A. (and certain other lenders), we refer to this as the Bank of America Credit Facility. The Bank of America Credit Facility consists of a term loan facility provided to one of our U.S. subsidiaries in an aggregate principal amount of \$75.0 million with a final maturity date of January 31, 2016, a revolving credit facility available to this U.S. subsidiary in an aggregate principal amount of \$25.0 million with a final maturity date of January 31, 2016 and a revolving credit facility available to our Hong Kong subsidiary in an aggregate principal amount of \$150.0 million with a final maturity date of January 31, 2016. As a result of certain incremental term loans entered into in June 2012, the aggregate principal amount of the 2012 Term Facility was increased from \$75.0 million to \$145.0 million, all of which was borrowed by the U.S. Borrower. The full amount of the term facility with our applicable U.S. subsidiary was drawn on January 31, 2012 and the incremental term loans were drawn in June 2012 and no amounts have been drawn on the revolving facilities as of December 31, 2012. We have agreed to prepay \$40 million of the 2012 Term Loan pursuant to an amendment to the Bank of America Credit Facility entered into in February 2013. On September 28, 2012, the Company issued \$220.0 million aggregate principal amount of 3.00% Convertible Senior Notes due 2017 (the "Notes"). The net proceeds from the issuance of the Notes were approximately \$212.6 million, after deducting fees paid to the initial purchasers and other offering costs. The Notes are senior unsecured obligations of the Company, which pay interest in cash semi-annually (on April 1 and October 1 of each year) at a rate of 3.00% per annum beginning on April 1, 2013. The Notes are governed by an Indenture dated September 28, 2012 with U.S. Bank National Association, as trustee (the "Indenture"). The Notes are not redeemable by the Company. The effective interest rate on the Notes as of December 31, 2012 was 10.7%.

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our audited consolidated financial statements and the related notes included elsewhere in this Transition Report on Form 10-K. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions as described under the "Cautionary Statement Concerning Forward-Looking Statements," that appears above in this Transition Report on Form 10-K. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under "Item 1A. Risk Factors" and elsewhere in this Transition Report on Form 10-K.*

### **Company Overview**

GT Advanced Technologies Inc., through its subsidiaries (referred to collectively as "we," "us" and "our") is a diversified technology company with innovative crystal growth equipment and solutions for the global solar, LED and electronics industries. Our products are designed to accelerate the adoption of new advanced materials that improve performance and lower the cost of manufacturing.

We operate through three business segments: our polysilicon business, our photovoltaic, or PV, business and our sapphire business. Information on each of these business segments and new developments regarding our business during the nine-month transition period ended December 31, 2012 is set forth in "Item 1. Business" above.

### **Corporate Name Change and Change in Fiscal Year End**

Effective August 8, 2011, we changed our name from GT Solar International, Inc. to GT Advanced Technologies Inc. The name change was effected pursuant to Delaware law by the merger of a wholly-owned subsidiary into the Company. In addition, on April 16, 2012, we amended our amended and restated by-laws to provide that our fiscal year will end on December 31 of each year. Prior to this amendment, our by-laws had provided that our fiscal year ended on the Saturday closest to March 31st of each year. As a result of this change to our fiscal year end, we report a nine-month transition period consisting of the period from April 1, 2012 to December 31, 2012, and our 2013 fiscal year will begin on January 1, 2013 and end on December 31, 2013.

### **Amendment to the 2012 Credit Agreement**

On January 31, 2012, the Company, our U.S. operating subsidiary and our Hong Kong subsidiary entered into a credit agreement (the "2012 Credit Agreement"), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer and the lenders from time to time party thereto. The 2012 Credit Agreement consisted of a term loan facility provided to our US operating subsidiary in an aggregate principal amount of \$75 million (which was increased to \$145 million pursuant to joinder agreements entered into in June 2012), a revolving credit facility available to our U.S. operating subsidiary in an aggregate principal amount of \$25 million with a final maturity date of January 31, 2016 and a revolving credit facility available to our Hong Kong subsidiary in an aggregate principal amount of \$150 million with a final maturity date of January 31, 2016. The 2012 Credit Agreement contains several covenants that we are required to comply with, among these are a financial covenant that we not (i) exceed a maximum leverage ratio (as defined in the 2012 Credit Agreement) of 2.0 at the end of any period of four consecutive fiscal quarters (as calculated in the 2012 Credit Agreement, as amended in June 2012) and (ii) fall below the minimum interest coverage ratio and maximum leverage ratio (as defined in the 2012 Credit Agreement) of 3.5 at the end of any period of four consecutive fiscal quarters (as calculated in the 2012 Credit Agreement).

On February 27, 2013, the Company (our U.S. operating subsidiary and our Hong Kong subsidiary), Bank of America N.A. and certain lenders agreed to amend certain provisions of the 2012

Credit Agreement. The amendment approved on February 27, 2013 waives the application of the leverage and interest coverage ratios through June 2014 (the "waiver period"). Through this action we avoid the possibility of a breach to these covenants. In addition, the amendment approved on February 22, 2013 provides that (i) we pay down the term facility by \$40 million (leaving a balance of \$100 million for the term facility), (ii) the interest rate payable on the loan is increased by 1.5% (which increase will be revised to 0.75% after the waiver period), (iii) the revolving credit facility for our US operating subsidiary be eliminated and reduces the revolving credit facility available to our Hong Kong subsidiary to \$125 million (and providing that such amounts may only be used for letters of credit during the waiver period), (iv) the Company comply with new covenants during the waiver period to maintain at all times minimum levels of liquidity (as defined in the 2013 Amendment), and quarterly cumulative minimum amounts of Consolidated Adjusted Earnings Before Interest, Tax, Depreciation and Amortization (as defined in the 2013 Amendment), (v) certain other covenants are revised, including with respect to restrictions on the incurrence of certain additional debt, make certain investments affiliate transactions and further restrictions on the payment of dividends and stock repurchases (as described in the 2013 Amendment), (vi) we pay certain fees to the Lenders. A copy of the 2013 Amendment is attached to this Transition Report on Form 10-K as Exhibit 10.86 and (vii) that certain subsidiaries of the Hong Kong subsidiary will provide guarantees and collateral to support the Hong Kong Revolving Credit Facility. In addition, the undrawn fee payable on the undrawn portion of the revolving commitments increases from 0.50% to 0.75%.

#### **October 2012 Restructuring**

As part of a program to reduce costs and increase operational efficiencies, we announced, on October 31, 2012, a plan to streamline worldwide operations to better align our cost structure with current market conditions by reducing our global workforce and closing or consolidating certain facilities. In connection with this program, we recorded \$3.7 million of restructuring and asset impairment expense during the quarter ended December 31, 2012, including \$2.5 million of severance and related benefits to reduce the workforce. The Company also recorded \$1.0 million for the write-down of assets associated with facility consolidations.

#### **Hazelwood Facility Idling**

On January 10, 2013, we announced our plan to cease operations at its Hazelwood, Missouri facility ("Hazelwood facility"). The idling of the Hazelwood facility is part of our effort to reduce costs and optimize R&D activities and the idling of the facility is expected to be completed on or before March 30, 2013. In connection with this action, we terminated the employment of most of the Hazelwood facility employees at various dates in the first quarter of fiscal 2013. We determined that as of December 31, 2012 it was probable that employees would be entitled to receive severance and related benefits and that these amounts were estimable and accordingly recorded the expense during the quarter ended December 31, 2012. In connection with the idling of the Hazelwood facility, we recorded \$29.8 million of restructuring and asset impairment expense during the quarter ended December 31, 2012 to the PV segment, comprised of approximately \$0.5 million of severance and related benefits and \$29.3 million for the write-down to fair value of certain long-lived, intangible assets and other assets associated with the Hazelwood facility. At December 31, 2012 the remaining fair value of the long-lived asset group of the Hazelwood facility was \$5.2 million. We expect to complete the payments related to severance and related benefits in fiscal 2013. We expect to incur approximately \$2.0 million to 4.0 million of additional expense, primarily lease exits costs, in 2013 related to the idling of the Hazelwood facility.

## Factors Affecting the Results of Our Operations

The following are some of the factors, trends and events that we expect will affect our future results of operations:

- Demand for our polysilicon and PV products and services are driven by end-user demand for solar power and demand for our sapphire products are driven by end-user demand for sapphire material, LED-quality material in particular. In each of our three business segments, the end-user demand for the output of our equipment has either declined substantially or supply has surpassed demand. In order to decrease inventories, we believe that companies selling polysilicon, solar cells and wafers and sapphire material, including some of our customers, have had to sell at prices that provide little or no margin. In certain cases, customers' have been unable to decrease inventories. We expect that these circumstances will continue through calendar year 2013. As a result, much of our business for calendar year 2013 will result from filling orders in our backlog and we do not expect that our backlog will increase during the same period. We do not expect to enter into any contracts, in any of our segments, for meaningful revenue or bookings during 2013. In addition, due to the length of the downturn impacting these industries, the continued financial health and viability of our customers is uncertain.
- The current limited demand for our products or the excess capacity in the end markets our customers serve is exacerbated by trade tensions between China and the U.S. Most recently, in October 2012, the U.S. Commerce Department issued a final ruling and levied anti-dumping duties on billions of dollars of solar panels and cells from China (and set countervailing duties as well). This final ruling will negatively impact our equipment customers in China. This follows a May 2012 Department of Commerce announcement of a preliminary determination that China had violated fair trade policies by "dumping" into the U.S. certain solar products at prices that were intended to advantage Chinese manufacturers. The Chinese government responded by saying these actions were deliberately provoking trade friction between the two nations. In July 2012, the Chinese Ministry of Commerce opened investigations on imports of solar-grade polysilicon from the U.S. and South Korea, that may result in trade duties on polysilicon imports from the U.S. and South Korean polysilicon manufacturers. In addition, the European Union has commenced an investigation into whether Chinese solar equipment manufacturers have dumped equipment into the E.U. in violation of trade regulations. If the E.U. imposes duties in connection with this investigation, it could harm our business since many of our Chinese customers sell into the E.U. This risk may be mitigated to some extent if manufacturing of solar wafers and cells shifted from China to Europe (or locations in other parts of the globe) as there may be increased demand in Europe for polysilicon and PV equipment that cannot be satisfied from China at comparable prices, the E.U. may not allow Chinese companies to avoid the duties by transferring manufacturing operations to Europe. In response to the E.U. investigation, in November 2012, the Chinese Ministry of Commerce announced that it was commencing a trade investigation into European exports of solar-grade polysilicon. Retaliatory tariffs and trade tensions with China and the U.S. and Europe (as well as South Korea, where some of our equipment customers are located) is causing uncertainty in the industry and is having a material adverse impact on our business since we sell into China and our equipment customers sell end products into Europe and the U.S. In particular, we believe that certain of our customers are delaying any purchasing or expansion plans until these various trade matters are resolved and we do not expect such resolution to take place during 2013 and, in fact, expect that they will grow more adversarial.
- Many of our polysilicon, PV and sapphire equipment customers are facing liquidity challenges due to the current state of the market. In addition, changes in the capital markets have resulted in a more stringent lending environment for solar and sapphire companies which in turn has caused decreased spending within the industries we serve as customers try to preserve their

liquidity. We believe the negative impact of a more stringent lending environment has resulted in decreased demand for all of our products. The commercial lending environment has not stabilized and if the availability of capital or credit for solar and sapphire companies remains constrained (including in China) or if capital or credit were to become even more limited, we expect that our results of operations, would continue to be negatively impacted.

- We believe that the recent downturn that has impacted the PV industry is not merely a cyclical downturn, but is the result of more structural shifts in the industry. We expect that any growth in the industry will be driven by technological changes that bringing greater efficiencies and cost-savings. Due to this structural change, we intend to discontinue any significant future investments in our DSS product line. We do have DSS furnaces in inventory and will attempt to sell these during 2013. We may not be able to generate a material amount of revenue from these sales, and expect that the average selling prices for this equipment will be well below our historical averages. Customers may request that we renegotiate terms of existing contracts to obtain lower prices or request that (in lieu of the equipment they ordered) they receive newer technology that we have developed, and such negotiations may result in reduced prices and reduction in the number of units to be delivered and a change in other terms, which may have an impact on our results of operations and our reported order backlog. As margins are dropping in the solar wafer and cell industry, PV companies may require these types of changes to their production equipment contracts in order to continue to maintain operations. We do not expect to release our next PV product offering, the HiCz™ puller, until 2014 and therefore the very limited revenue from DSS sales will be our only source of PV revenue in 2013, and perhaps beyond.
- The sovereign debt crisis in Europe has led to economic instability, depreciation of the euro, fiscal austerity, reduction in government support for certain programs (including solar incentives) and slowing growth in the entire region. While we have very limited sales to customers in Europe, a portion of the end-users of solar power and LED materials are located in Europe, and as a result, our equipment customers have been negatively impacted by the sovereign debt crisis. We expect that this crisis will cause further decrease in demand for our polysilicon, sapphire and PV equipment offerings. In addition, there is increasing evidence that this economic instability is impacting other regions as well, including China, and may be directly impacting our equipment customers.
- There is an excess of polysilicon manufacturing capacity and the market price for polysilicon has significantly declined. As a result, we expect that there will be a greater focus on reducing production costs among polysilicon manufacturers, putting substantial pressure on our customers to lower the cost of equipment they purchase from us or to delay or cancel their purchases of polysilicon production equipment. These factors may also produce consolidation in the industry. We believe we are well positioned to capture a portion of the future demand for polysilicon equipment among the more limited number of manufacturers by delivering equipment with higher throughput and lower power consumption, leading to greater efficiencies. However, the timing of any future purchases is uncertain and it may be a significant amount of time before we see the benefits of any purchases of equipment, if at all.
- Due to structural changes in the PV industry mentioned above, and the limited demand for PV cells, modules and wafers, most of our PV customers have lowered capacity utilization rates and delayed or terminated expansion projects as they respond to weaker end market demand. We expect that the market demand for multicrystalline PV products will remain very limited (particularly as a result of improvements in monocrystalline growth technologies).
- Demand for PV on-grid applications (and, in turn, our PV equipment) has historically been dependent in part on the availability and size of government subsidies and incentives. As

governments face limited revenues and spending constraints, they are reducing or eliminating support for certain programs. We believe that governments are moving more aggressively to reduce all forms of governmental assistance to the solar industry and we expect that governmental subsidies, feed-in tariffs and similar supports will be eliminated in their entirety in the near future.

- The price for sapphire material has recently experienced significant decreases. We expect that current decreased prices will continue. Consequently, we anticipate that demand for our ASF systems will also remain lower than in previous quarters. Further, customers have requested, and expect that they will continue to request, delivery of ASF systems be delayed until the price of sapphire recovers which has delayed the timing of which amounts attributable to ASF systems roll-off of backlog and into revenue and the timing on which we enter into new contracts to sell ASF systems. Additionally, we may receive requests to cancel deliveries, which would reduce our reported backlog.
- One of the expected drivers of demand for sapphire was expected to be, in large part, the increased use of sapphire materials in general illumination. To this point, that broad adoption of LED in lighting is slower than expected. As a result, the future demand for ASF systems attributable to this market are not expected to increase markedly in the immediate future. The use of sapphire in industrial applications and consumer electronics has been adopted to a limited extent, and could lead to new market opportunities for the ASF system. While the use of sapphire in these applications is still in the very early stages, it represents a potential market and may result in increased demand for sapphire manufacturing equipment.
- Due to the challenges faced in our industries, during three months ended December 31, 2012, the Company incurred charges of \$60,192 to record PV inventory at its net realizable value, wrote down PV goodwill by \$57,037 and recorded impairment charges of \$29,261 related to certain long-lived, intangible and other assets located at our HiCz Hazelwood facility. If the prospects for our business do not improve, we could be required to recognize additional material charges.
- We have made investments in developing new technology, such as our HiCz puller, silicon carbide furnace and Hyperion™ ion implanter. During the fiscal year ending December 31, 2013, we do not expect receive any revenue from these investments.
- In addition, our results of operations are affected by a number of other factors including the availability and market price of polysilicon, alumina material and certain process consumables, availability of raw materials, foreign exchange rates, interest rates, commodity prices (including molybdenum, steel and graphite prices) and macroeconomic factors, including the availability of capital that may be needed by our customers, as well as political, regulatory and legal conditions in the international markets in which we conduct business, including China.

### **Order Backlog**

Our order backlog primarily consists of amounts due under written contractual commitments and signed purchase orders for PV, polysilicon and sapphire equipment not yet shipped to customers, deferred revenue (which represents amounts for equipment that has been shipped to customers but not yet recognized as revenue) and short-term contracts or sales orders for sapphire materials. Contracts in our order backlog for PV, polysilicon and sapphire equipment generally require the customer to either post a standby letter of credit in our favor and/or make advance payment prior to shipment of equipment.

From the date of a written commitment, we generally would expect to deliver PV and sapphire equipment products over a period ranging from three to nine months and polysilicon products over a

period ranging from twelve to eighteen months, however, in certain cases revenue may be recognized over longer periods. Disregarding the effect of any contract terminations or modifications, we would expect to convert approximately 30% of our December 31, 2012 order backlog into revenue during the fiscal year ending December 31, 2013 and approximately 70% thereafter. Although most of our orders require substantial non-refundable deposits, our order backlog as of any particular date should not be relied upon as indicative of our revenues for any future period.

If a customer fails to perform its outstanding contractual obligations on a timely basis, and such failure continues after notice of breach and a cure period, we may terminate the contract. Our contracts generally do not contain cancellation provisions and in the event of a customer breach, the customer may be liable for contractual damages. During the three-month period ended December 31, 2012, we have identified certain contracts in our order backlog that have not been terminated or modified, however, we expect that certain customers will not fulfill their obligations under these respective contracts. This is the first time that we have removed such contracts from the amount we report in our order backlog. As a result, during the nine-month period ended December 31, 2012, we terminated, modified or removed contracts from our reported order backlog resulting in a \$220.5 million reduction (81% of the reduction was attributable to six contracts, of which \$121.4 million related to contracts that have not been legally terminated or modified but we have removed from our reported backlog). During the fiscal year ended March 31, 2012, we terminated or modified contracts resulting in a \$135.9 million reduction in our order backlog (74% of the reduction was from six contracts). During the nine-month period ended December 31, 2012, we recorded revenues of \$8.5 million from terminated contracts and during the fiscal year ended March 31, 2012 we recorded revenues of \$35.5 million from terminated contracts.

Although we have a reasonable expectation that most of our customers will substantially perform on their contractual obligations that are included in our reported order backlog, we attempt to monitor those contracts that we believe to be at risk. Due to recent industry market conditions, as noted above, we have removed certain amounts from our reported order backlog that are attributable to contracts that we do not believe our customers will fulfill.

We conduct negotiations with certain customers who have requested that we extend their delivery schedules or make other contract modifications, or who have not provided letters of credit or made payments in accordance with the terms of their contracts. We engage in a certain level of these negotiations in the ordinary course. We monitor the effect, if any, that these negotiations may have on our future revenue recognition. If we cannot come to an agreement with these customers or if we believe our customers cannot or will not perform their obligations, our reported order backlog could be reduced. Other customers with contracts in our order backlog that are not currently under negotiation, or that we consider to be at risk, may approach us with similar requests in the future, or may fail to provide letters of credit or to make payments when due. If we cannot come to an agreement with these customers, our order backlog could be further reduced. If we do come to an agreement with customers on extending delivery schedules, the timing of expected revenue recognition could be pushed into periods later than we had anticipated.



The table below sets forth our reported order backlog as of December 31, 2012 and March 31, 2012 by business segment:

<u>Product Category</u>	<u>December 31, 2012</u>		<u>March 31, 2012</u>	
	<u>Amount</u>	<u>% of Backlog</u>	<u>Amount</u>	<u>% of Backlog</u>
	(dollars in millions)			
Photovoltaic business . . . . .	\$ 4	1%	\$ 138	8%
Polysilicon business . . . . .	529	42%	880	49%
Sapphire business . . . . .	716	57%	761	43%
Total . . . . .	<u>\$1,249</u>	<u>100%</u>	<u>\$1,779</u>	<u>100%</u>

Our reported order backlog attributable to our PV, polysilicon and sapphire businesses as of December 31, 2012, included deferred revenue of \$121.9 million, of which \$2.6 million related to our PV business, \$113.4 million related to our polysilicon business and \$5.9 million related to our sapphire business. Cash received in deposits related to our order backlog where deliveries have not yet occurred was \$181.1 million as of December 31, 2012.

As of December 31, 2012, our order backlog consisted of contracts with 8 PV customers, contracts with 15 polysilicon customers, contracts with 5 sapphire equipment customers and contracts with 54 sapphire materials customers. Our order backlog as of December 31, 2012, included \$429.4 million, \$261.3 million and \$155.0 million attributed to three different customers, each of which individually represents 34%, 21%, and 12%, respectively, of our order backlog.

*Critical Accounting Policies and Estimates*

In preparing our financial statements in conformity with generally accepted accounting principles in the United States (GAAP), we make estimates, judgments and assumptions about future events that affect the amounts of reported assets, liabilities, revenues and expenses, as well as the disclosure of contingent liabilities in our financial statements and the related notes thereto. On a periodic basis, we evaluate our estimates, including those related to revenue, inventory, income taxes and business combinations. We operate in competitive industries that are influenced by a variety of diverse factors including, but not limited to, technological advances, product life cycles, long customer and supplier lead times, and geographic and macroeconomic trends. Estimating product demand beyond a relatively short forecasting horizon is difficult and prone to forecasting error due to the inherent lack of visibility in the industry. Some of our accounting policies require the application of significant judgment by management in the selection of appropriate assumptions for determining these estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. As a result, we cannot assure you that actual results will not differ significantly from estimated results. We base our judgments and estimates on our historical experience, on our forecasts and on other available information, as we deem appropriate. Our significant accounting policies are described in Note 2 to our consolidated financial statements for the nine-month period ended December 31, 2012 included elsewhere in this Transition Report on Form 10-K.

We believe that the following are the critical accounting policies which are the most important to the portrayal of our financial condition and that require the most subjective judgment used by us in the preparation of our consolidated financial statements.

## Revenue Recognition

The majority of our contracts involve the sale of equipment and services under multiple element arrangements. We recognize revenue when persuasive evidence of an arrangement exists, the sale price is fixed or determinable, collectability is reasonably assured through historical collection results and regular credit evaluations, and delivery has occurred and there are no uncertainties regarding customer acceptance.

On April 3, 2011, we prospectively adopted the provisions of *Accounting Standards Update ("ASU") 2009-13, Revenue Recognition (Topic 605)—Multiple-Deliverable Revenue Arrangements ("ASU 2009-13")* for new and materially modified arrangements originating on or after April 3, 2011. *ASU 2009-13* amended the accounting standards for multiple-deliverable revenue arrangements to require an entity to allocate revenue in an arrangement on the basis of the relative selling price of deliverables at the inception of the arrangement. When applying the relative selling price method, the selling price for each deliverable is determined using vendor-specific objective evidence of selling price ("VSOE"), if it exists, or third-party evidence of selling price ("TPE"). If neither VSOE nor TPE exists, then we use its best estimate of the selling price ("ESP") for that deliverable. The use of the residual method was eliminated by *ASU 2009-13*.

The multiple-deliverable revenue guidance requires that we evaluate each deliverable in an arrangement to determine whether such deliverable would represent a separate unit of accounting. The product or service constitutes a separate unit of accounting when it fulfills the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis and (b) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially our control. Our sales arrangements do not include a general right of return and the majority of our products and services qualify as separate units of accounting.

For transactions entered into prior to the adoption of *ASU 2009-13*, where objective evidence of fair value exists for all undelivered elements, but not delivered elements, we apply the residual method. If objective evidence of fair value does not exist for the undelivered elements of the arrangement, all revenue is deferred until such evidence does exist, or until all elements for which we do not have objective evidence of fair value are delivered, whichever is earlier assuming all other revenue recognition criteria are met.

Consistent with the methodology under the previous accounting guidance, we establish VSOE based upon the price charged when the same element is sold separately or established by management having the relevant pricing authority. When VSOE exists, it is used to determine the selling price of a deliverable. Objective evidence of fair value for installation and training services is based upon the estimated time to complete the installation and training at the established hourly rates that we charge for similar professional services on a stand-alone basis. We have not been able to establish VSOE for certain of our products and for certain of our services because we have not sold such products or services on a stand-alone basis.

When VSOE is not established, we attempt to establish the selling price of each element based on TPE. Our products and services differ from that of our competitors and therefore, comparable pricing of competitors' products and services with similar functionality cannot be obtained. Accordingly, we generally are not able to determine TPE for our products or services.

When we are unable to establish selling price using VSOE or TPE, we use ESP in our allocation of arrangement consideration for the relevant deliverables. The objective of ESP is to determine the price at which we would transact a sale if a product or service was sold on a stand-alone basis. We determine ESP for our products and certain services by considering multiple factors including, but not limited to, overall market conditions, profit objectives and historical pricing practices for such

deliverables. Changes in the ESP of the deliverables in our typical contracts is not expected to have a material impact on the timing of revenue recognition as the majority of the allocated consideration is weighted toward the equipment deliverables. In allocating arrangement consideration to the Company's typical deliverables, equipment deliverables receive a higher proportion of the consideration than other deliverables due to their ESP's being significantly higher than the Company's other deliverables.

Our ASF and DSS equipment contracts contain customer-specified acceptance provisions. Polysilicon reactors contracts do not contain customer-specified acceptance provisions, and are generally deemed to be contractually accepted at the time the reactor is initially delivered to the customer's facility. For arrangements containing products that we consider to be "established," we recognize revenue upon delivery, assuming all other revenue recognition criteria are met. For arrangements containing products considered to be "new," or containing customer acceptance provisions that are deemed to be more than perfunctory, revenue is recorded upon customer acceptance or at the time the product is determined to be "established".

Products are classified as "established" products if post-delivery acceptance provisions and the installation process have been determined to be routine and there is a demonstrated history of achieving the predetermined contractual objective specifications.

In determining when a "new" product is considered "established", we consider the following factors: (i) the stability of the product's technology, (ii) the test results of products prior to shipment, (iii) successful installations at customer's sites and (iv) the performance results once installed. We generally believe that the satisfaction of the first two criteria, coupled with the satisfaction of final two criteria for multiple product units in the facilities of at least three to five separate customers that, in each case, results in acceptance in accordance with the standard contract terms are necessary to support the conclusion that there are no uncertainties regarding customer acceptances of the standard objective specifications and therefore the installation process can be considered perfunctory.

### **Inventories**

We value our inventory at the lower of cost or market. The determination of the lower of cost or market requires that we quantify the difference between the cost of inventory and its estimated market value and to make significant assumptions about our customers' future demand for products, the future demand by end-users of the material generated with our equipment and any future transitions we make to new product offerings from our legacy products. These assumptions include, but are not limited to, future manufacturing schedules, customer demand, supplier lead time and technological and market obsolescence.

We estimate the excess and obsolescence of inventory based on factors such as inventory on hand, historical usage and forecasted demand based on backlog and other factors. Uncertainty about future economic conditions including, (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by us; (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of our customers in China (where a majority of the Company's customers are located) continues to create uncertainty among our customers and in the industries we serve; (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries, due in part to changes in the global capital markets which have resulted in a more stringent lending environment and decreased spending within the industries we serve (as customers try to preserve their liquidity); (iv) deterioration of the financial health of our customers and (v) structural changes in the PV industry which, we believe, will require that any recovery in the PV market will be driven by changes in technology and that demand for existing multicrystalline products (our DSS product) will be very limited. As a result of these factors, in December 2012 we intend to discontinue any significant future investments in our DSS product line, and accordingly, believe future sales of our DSS products will be

limited. The foregoing factors, among others, triggered impairment assessments during the three-month period ended December 31, 2012, that resulted in us recording charges of \$60.2 million to record PV inventory at its net realizable value. Additionally, the Company recorded charges of \$8.4 million in cost of sales, in connection with the write-off of all remaining PV vendor advances. In the event that our forecasted selling prices or units sold are inaccurate, additional charges may be incurred. In the event that our forecasted selling prices or units are inaccurate, additional charges may be incurred. Refer to the “Factors Affecting the Results of Operations” above in this Transition Report on Form 10-K for further information.

### **Business Combinations**

Business combinations are accounted for at fair value. Acquisition costs are expensed as incurred and recorded in general and administrative expenses; in-process research and development is recorded at fair value as an indefinite-lived intangible asset at the acquisition date; restructuring costs associated with a business combination are expensed subsequent to the acquisition date; contingent consideration obligations are recorded at fair value on the date of acquisition, with increases or decreases in the fair value arising from changes in assumptions or discount periods recorded as contingent consideration expense (income) in the consolidated statement of operations in subsequent periods; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date measurements generally affect income tax expense. All changes that do not qualify as measurement period adjustments are included in current period earnings. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management’s estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. Significant judgment is required in estimating the fair value of intangible assets acquired in a business combination and in assigning their respective useful lives. The fair value estimates are based on available historical information and on future expectations and assumptions deemed reasonable by management at the time.

Significant judgment is required in estimating the fair value of intangible assets acquired in a business combination and in assigning their respective useful lives. The fair value estimates are based on available historical information and on future expectations and assumptions deemed reasonable by management at the time. Examples of critical estimates in valuing certain intangibles assets we have acquired include, but are not limited to, (i) future expected cash flows from acquired technologies, (ii) expected costs to develop in-process research and development into commercially viable products and estimated cash flows from the projects when completed, and (iii) discount rates. If the actual results differ from the estimates and judgments we utilized, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, or require acceleration of the amortization expense of finite-lived intangible assets.

### **Valuation of Goodwill**

Goodwill is evaluated at the reporting unit level and is attributable to the Company’s PV and sapphire business segments. We assess our goodwill balance within our reporting units annually, as of the first day of the fourth fiscal quarter, and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable to determine whether any impairment in this asset may exist and, if so, the extent of such impairment. The process of evaluating the potential impairment of goodwill is highly subjective and requires significant judgment at many points during the analysis.

The goodwill impairment test involves a two-step process. The first step is a comparison of each reporting unit’s fair value to its carrying value. If the reporting unit’s fair value exceeds its carrying value, no further procedures are required. However, if a reporting unit’s fair value is less than its carrying value, an impairment of goodwill may exist, requiring a second step to measure the amount of

impairment loss. In this step, the reporting unit's fair value is allocated to all of the assets and liabilities of the reporting unit, including any unrecognized intangible assets, in an analysis to calculate the implied fair value of goodwill in the same manner as if the reporting unit was being acquired in a business acquisition. If the implied fair value of goodwill is less than the recorded goodwill, an impairment charge is recorded for the difference. Our reporting units are consistent with the reportable segments identified in Note 18, *Segment and Geographical Information* (See Item 8. Financial Statements and Supplementary Data included elsewhere in this Transition Report on Form 10-K), which are based on the manner in which we operate our business and the nature of those operations.

We estimate the fair value of each reporting unit using a combination of the income approach and the market approach. The income approach incorporates the use of a discounted cash flow method in which the estimated future cash flows and terminal values for each reporting unit are discounted to a present value using an appropriate discount rate. Cash flow projections are based on management's estimates of economic and market conditions which drive key assumptions of revenue growth rates, operating margins, capital expenditures and working capital requirements. The discount rate is based on the specific risk characteristics of each reporting unit, the weighted average cost of capital and its underlying forecast. The guideline public company method of the market approach estimates fair value by applying performance metric multiples to the reporting unit's prior and expected operating performance. The multiples are derived from comparable publicly traded companies with similar operating and investment characteristics as the reporting unit. If the fair value of the reporting unit derived using the income approach is significantly different from the fair value estimate using the market approach, we reevaluate the assumptions used in the two models. The fair values determined by the market approach and income approach, as described above, are weighted to determine the fair value for each reporting unit. The weighted values assigned to each reporting unit are primarily driven by two factors: 1) the number of comparable publicly traded companies used in the market approach, and 2) the similarity of the operating and investment characteristics of the reporting units to the comparable publicly traded companies used in the market approach.

In order to assess the reasonableness of the calculated reporting unit fair values, we also compare the sum of the reporting units' fair values to our market capitalization (per share stock price times number of shares outstanding) and calculate an implied control premium (the excess of the sum of the reporting units' fair values over the market capitalization). We evaluate the reasonableness of the control premium by comparing it to control premiums of recent comparable transactions. If the implied control premium is not reasonable in light of these recent transactions, we will reevaluate the fair value estimates of the reporting units by adjusting the discount rates and/or other assumptions.

As a result of the change in the Company's fiscal year end from the Saturday closest to March 31 to December 31, the Company will report a nine-month transition period consisting of the period from April 1, 2012 to December 31, 2012. Effective in the quarter ended December 31, 2012, the Company elected to change its annual goodwill impairment testing date from the day following the Saturday closest to December 31 to the day following the Saturday closest to September 30, in order to maintain the Company's existing accounting practice to assess goodwill for impairment as of the first day of the last quarter of the fiscal year. The Company believes this change in accounting principle is preferable because it aligns the timing of the annual goodwill impairment test with the Company's revised planning and budgeting process, which will allow the Company to utilize the updated business forecasts in the discounted cash flow analyses used in the estimate of fair value of the Company's reporting units. This change did not accelerate, delay, avoid or cause a goodwill impairment charge. As it is impracticable to objectively determine the estimates and assumptions necessary to perform the annual goodwill impairment test without the use of hindsight as of each annual impairment testing date for periods prior to September 30, 2012, the Company has prospectively applied the change in the annual goodwill impairment testing date from September 30, 2012. During 2012, the Company tested its goodwill for impairment as of January 1, 2012 (former annual impairment testing date) and

September 30, 2012 (current annual impairment testing date), and concluded there was no impairment of the carrying value of goodwill as of either date. In light of the continued challenges in the solar market, including (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by the Company, (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of the Company's customers, (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries, (iv) the deterioration of our customers financial condition, as well as the sustained decline in our stock price led us to determine that sufficient indicators existed to require performance of an interim goodwill impairment analysis as of December 31, 2012.

We applied a weighting to both the discounted cash flow method under the income approach (75%) and the guideline public company method under the market approach (25%) to estimate the fair value of the PV, sapphire and polysilicon reporting units. The weighting of the two approaches did not have a material impact on the impairment calculation. The estimates used in the impairment testing were consistent with the forecasts that we use to manage our business, and considered the significant developments that occurred during the three months ended December 31, 2012.

The PV reporting unit did not pass the first step of the interim goodwill impairment test as of December 31, 2012. As such, we allocated the fair value of the PV reporting unit to all of its assets and liabilities. Based on our analysis, the implied fair value of goodwill was substantially lower than the carrying value of goodwill for the PV reporting unit. As a result, we recorded a \$57.0 million goodwill impairment charge related to the PV reporting unit during the three months ended December 31, 2012. As of December 31, 2012, the PV reporting unit had \$3,378 of goodwill remaining. The sapphire reporting unit's fair value exceeded its carrying value in the first step of the interim goodwill impairment test as of December 31, 2012 and accordingly there was no impairment of goodwill for this reporting unit.

The evaluation of goodwill for impairment requires the exercise of significant judgment. While we believe the assumptions used in the annual and interim impairment test are reasonable, the analysis is sensitive to adverse changes in the assumptions used in the valuations. In particular, changes in the projected cash flows, the discount rate, the terminal year growth rate and market multiple assumptions could produce significantly different results for the impairment analyses. In the event of future changes in business conditions, the Company will be required to reassess and update its forecasts and estimates used in future impairment analyses. If the results of these analyses are lower than current estimates, a material impairment charge may result at that time.

### **In-Process Research and Development**

In-process research and development ("IPR&D") assets are considered indefinite-lived intangible assets until completion or abandonment of the associated research and development efforts. IPR&D represents the fair value assigned to incomplete technologies that we acquire, which at the time of acquisition have not reached technological feasibility and have no alternative future use. A technology is considered to have an alternative future use if it is probable that the acquirer will use the asset in its incomplete state as it exists at the acquisition date, in another research and development project that has not yet commenced, and economic benefit is anticipated from that use. Substantial additional research and development may be required before any of our IPR&D programs reach technological feasibility. Upon completion of the projects, the IPR&D assets will be amortized over their estimated useful lives.

Management assumes responsibility for determining the valuation of the acquired IPR&D programs. The fair value assigned to IPR&D for each acquisition is estimated by discounting, to present value, the future cash flows expected from the programs since the date of our acquisition.

Accordingly, such cash flows reflect our estimates of revenues, costs of sales, operating expenses and income taxes from the acquired IPR&D programs based on a number of factors.

The discount rates used are commensurate with the uncertainties associated with the economic estimates described above. The resulting discounted future cash flows are then probability-adjusted to reflect the different stages of development, the time and resources needed to complete the development of the product and the risks of advancement through the product approval process.

Use of different estimates and judgments could yield materially different results in our analysis and could result in materially different asset values or expense. There can be no assurance that we will be able to successfully develop and complete the acquired IPR&D programs and profitably commercialize the underlying product candidates before our competitors develop and commercialize similar products, or at all. Moreover, if certain of the acquired IPR&D programs fail, are abandoned during development, then we may not realize the value we have estimated and recorded in our financial statements on the acquisition date, and we may also not recover the research and development investment made since the acquisition date to further develop that program. If such circumstances were to occur, our future operating results could be materially adversely impacted.

We test our indefinite-lived IPR&D assets for impairment on an annual basis, or more frequently if an impairment indicator is present, by comparing the fair value of each IPR&D asset to the carrying value for the asset. If the carrying value is greater than the fair value of the asset, the Company is required to write down the value of the IPR&D asset to its fair value. We will test its indefinite-lived IPR&D assets for potential impairment until the projects are completed or abandoned.

#### **Finite-Lived Intangible Assets and Other Long-lived Assets**

We periodically test our finite-lived intangible and other long-lived assets (“long-lived assets”) for recoverability whenever events or changes in circumstances suggest that the carrying value of such asset may not be recoverable.

Indicators we consider include adverse changes in the business climate that could affect the value of our long-lived assets, downward revisions in our revenue outlook, decreases or slower than expected growth in revenue or other factors that could significantly impact the recoverability of the asset.

A long-lived asset or asset group that is held for use is required to be grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities.

We recognize an impairment loss for long-lived assets if the carrying amount of a long-lived asset is not recoverable based on its undiscounted future cash flows. Any such impairment loss is measured as the difference between the carrying amount and the fair value of the asset. Assumptions and estimates about future values and remaining useful lives of our long-lived assets are complex and subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends and internal factors such as changes in our business strategy and our internal forecasts.

In connection with the impairment analysis performed in December 2012, we evaluated the long-lived assets associated with our PV business at the lowest level of identifiable cash flows. Based on this analysis we determined that the undiscounted cash flows forecasted for our HiCz equipment asset group (which included finite-lived intangibles of \$61.3 million) exceeded the asset groups carrying value and therefore no impairment was recognized. The forecasted undiscounted cash flows consider the Company's expectation that substantially all of our future PV equipment sales will be from our next generation PV equipment offering, our HiCz™ tool. The HiCz™ tool is still under development and is projected to be commercially available in 2014. Therefore, we expect to have no meaningful sales or revenue in this asset group until 2014. In the event that our HiCz™ tool does not gain market acceptance among PV manufacturers in 2014, material impairment charges may be incurred.

Although we believe the historical assumptions and estimates we have made are reasonable and appropriate, different assumptions and estimates could materially impact our reported financial results. During December 2012, we recorded impairment charges of \$29.3 million on certain of our long-lived assets, primarily driven by the idling of our Hazelwood facility based on the expected cash flows associated with this asset group. There were no such write-downs in the prior year.

### **Income Taxes**

Our business is global and as such we are subject to taxes in both the US and foreign jurisdictions. Tax laws and tax rates vary substantially in these jurisdictions and are, along with the interpretation of the tax laws, subject to change based on the political and economic climate in those countries.

Significant judgment is required in determining our worldwide income tax provision and recording the related tax assets and liabilities. In the ordinary course of our business, there are operational decisions, transactions, facts and circumstances, and calculations which make the ultimate tax determination uncertain. Furthermore, our tax positions are periodically subject to challenge by taxing authorities. We have recorded reserves for taxes and the associated interest that may become payable in future years as a result of audits by tax authorities. Certain of these reserves are for uncertain income tax positions taken on income tax returns.

We recognize tax benefits for uncertain tax positions based on an assessment of whether the position is more likely than not to be sustained by the taxing authorities. If this threshold is not met, the full amount of the uncertain tax position is recorded as a liability. If the threshold is met, the tax benefit that is recognized is the largest amount that is greater than 50% likely of being realized upon ultimate settlement. This analysis presumes the taxing authorities' full knowledge of the positions taken and all relevant facts, but does not consider the time value of money. We also accrue for interest and penalties on these uncertain tax positions and include such charges in the income tax expense in the consolidated statements of operations. Based on our forecasts of future taxable income and history of profitability (including cumulative profitability over the last three years within the primary tax jurisdictions), we anticipate that it is more-likely-than-not that our results of future operations will generate sufficient taxable income to allow us to realize our deferred tax assets. Therefore, we did not record a valuation allowance against our net deferred tax assets as of December 31, 2012. In determining the more-likely-than-not criterion, we evaluate all positive and negative evidence as of the end of each reporting period. The realization of the deferred tax assets ultimately depends on the existence of sufficient taxable income in either the carryback or carryforward periods under the tax law. If future events differ from our current forecasts, a valuation allowance may need to be established which likely would have a material adverse effect on our results of operations, financial condition and capital position. We will continue to update our assumptions and forecasts of future taxable income and assess the need for a valuation allowance.



## Results of Operations

The following tables set forth the results of operations as a percentage of revenue for the nine-month periods ended December 31, 2012 and December 31, 2011 and the fiscal years ended March 31, 2012 and April 2, 2011. The financial results for the nine-month period ended December 31, 2011 have not been audited:

	Nine-Month Period Ended		Fiscal Years Ended	
	December 31, 2012	December 31, 2011	March 31, 2012	April 2, 2011
<b>Statements of Operations Data:*</b>				
Revenue . . . . .	100%	100%	100%	100%
Cost of revenue . . . . .	86	54	55	58
Gross profit . . . . .	14	46	45	42
Research and development . . . . .	15	6	5	3
Selling and marketing . . . . .	3	3	2	2
General and administrative . . . . .	12	8	6	5
Contingent consideration (income) expense . . . . .	(2)	1	1	1
Impairment of goodwill . . . . .	15	—	—	—
Restructuring charges and asset impairments . . . . .	9	—	—	—
Amortization of intangible assets . . . . .	2	1	1	1
(Loss) income from operations . . . . .	(40)	27	30	30
Interest income . . . . .	—	—	—	—
Interest expense . . . . .	(2)	(2)	(1)	—
Other, net . . . . .	—	—	—	—
Income before income taxes . . . . .	(42)	25	29	30
(Benefit) provision for income taxes . . . . .	(4)	8	9	11
Net (loss) income . . . . .	<u>(38)%</u>	<u>17%</u>	<u>20%</u>	<u>19%</u>

\* Percentages subject to rounding.

### Nine-Month Period Ended December 31, 2012 Compared to Nine-Month Period Ended December 31, 2011

*Revenue.* The following table sets forth revenue for the nine-month periods ended December 31, 2012 and December 31, 2011.

Business Category	Nine-Month Period Ended			
	December 31, 2012	December 31, 2011	Change	% Change
	(dollars in thousands)			
Photovoltaic business . . . . .	\$ 17,550	\$344,171	\$(326,621)	(95)%
Polysilicon business . . . . .	306,662	209,334	97,328	46%
Sapphire business . . . . .	55,434	48,310	7,124	15%
Total revenue . . . . .	<u>\$379,646</u>	<u>\$601,815</u>	<u>\$(222,169)</u>	<u>(37)%</u>

Our total revenue decreased 37% to \$379.6 million for the nine-month period ended December 31, 2012, as compared to \$601.8 million for the nine-month period ended December 31, 2011, primarily due to limited demand for our DSS products. This decrease was offset, in part, by the commercialization of our ASF systems and increased demand in our polysilicon business.

Revenue from our PV business decreased 95% to \$17.6 million for the nine-month period ended December 31, 2012 as compared to \$344.2 million for the nine-month period ended December 31, 2011. The decrease is primarily due to limited demand for our DSS products, which led to both fewer orders and shipments of our DSS products to solar manufacturers as compared to the corresponding period in the preceding year. This trend of decreased demand for DSS products began in fiscal year 2012 and, we believe, is the result of the current excess capacity of solar wafers, modules and cells. We do not expect to recognize significant revenues, if any, from our PV business until commercial acceptance of our HiCz™ product, which is not expected to be available until 2014.

Revenue from our polysilicon business increased by 46% to \$306.7 million for the nine-month period ended December 31, 2012 as compared to \$209.3 million for the nine-month period ended December 31, 2011. Polysilicon revenue for the nine-month period ended December 31, 2012 relates primarily to contracts that were in our order backlog as of March 31, 2012, for which the revenue recognition process has been completed. The increase was driven primarily by revenue recognized on customer contracts for the sale of hydrochlorination equipment and technology. Polysilicon revenue may fluctuate significantly from period to period due to the changes in supply and demand in the marketplace and the length of time it takes to complete our obligations under the contracts. As a result of this variability, our polysilicon business tends to have a higher level of deferred revenue than our other business segments. Approximately 93% and 73% of our deferred revenue balances at December 31, 2012 and December 31, 2011, respectively, relate to our polysilicon business.

Included in polysilicon revenue for these periods is revenue from contracts that grant contractual rights which require revenue to be recognized ratably over the contract period. Revenue recognition on these contracts commenced when all other elements had been delivered and other contract criteria had been met. During the nine-month periods ended December 31, 2012 and December 31, 2011, we recognized revenue on a ratable basis from the contracts of \$128.8 million and \$132.1 million, respectively.

Our sapphire business revenue during the nine-month period ended December 31, 2012 is attributable to the sale of sapphire equipment and material used mostly, we believe, in sapphire-based LED applications and other specialty markets. Revenue from our sapphire business was \$55.4 million for the nine-month period ended December 31, 2012, as compared to \$48.3 million for the nine-month period ended December 31, 2011. The increase in revenue for our sapphire business is primarily related to an increase in the number of ASF systems which satisfied contractual acceptance criteria during the nine-month period ended December 31, 2012 as compared to the same period in the prior year.

A substantial percentage of our revenue results from sales to a small number of customers. Three of our customers accounted for 68% of our revenue for the nine-month period ended December 31, 2012 and two customers accounted for 33% of our revenue for the nine-month period ended December 31, 2011. No other customer accounted for more than 10% of our revenue during the respective periods.

Based on our results through December 31, 2012 and our order backlog as of that date, we believe our polysilicon and sapphire businesses will account for a majority of our revenue for the calendar year ending December 31, 2013. We believe that no one customer will account for more than 25% of our total annual revenue for the year ending December 31, 2013.

*Gross Profit and Gross Margins.* The following tables set forth gross profit and gross margin for the nine-month periods ended December 31, 2012 and December 31, 2011:

	Nine-Month Period Ended			
	December 31, 2012	December 31, 2011	Change	% Change
	(dollars in thousands)			
Gross profit				
Photovoltaic business(1) . . . . .	\$(70,563)	\$166,875	\$(237,438)	
Polysilicon business . . . . .	121,958	91,938	30,020	
Sapphire business(2) . . . . .	2,681	15,659	(12,978)	
Total . . . . .	<u>\$ 54,076</u>	<u>\$274,472</u>	<u>\$(220,396)</u>	(80)%

	Nine-Month Period Ended	
	December 31, 2012	December 31, 2011
Gross margins		
Photovoltaic business(1) . . . . .	(402)%	48%
Polysilicon business . . . . .	40%	44%
Sapphire business(2) . . . . .	5%	32%
Overall . . . . .	14%	46%

(1) Gross profit and gross margin for our PV business for the nine-month period ended December 31, 2012 reflects charges totaling \$71.5 million in connection with the write-down of excess and obsolete PV inventory and the write-off of all remaining PV vendor advances.

(2) Gross profit and gross margin for our sapphire business for the nine-month period ended December 31, 2012 reflects a charge of \$5.2 million for excess and obsolete inventory.

Overall gross profit as a percentage of revenue, or gross margin, decreased for the nine-month period ended December 31, 2012 to 14% from 46% for the nine-month period ended December 31, 2011. The decrease in our gross margins were driven primarily by charges for excess and obsolete inventory and the the write-off of all remaining PV vendor advances in our PV business.

Our gross margins in our PV, polysilicon and sapphire businesses tend to vary depending on the volume, pricing and timing of revenue recognition.

Our PV gross margins for the nine-month period ended December 31, 2012 were not meaningful as a result of the significant write-down of PV inventories and the write-off of certain PV vendor advances, as noted above. PV gross margin for the nine-month period ended December 31, 2011 were 48%. During the nine-month period ended December 31, 2012, the solar industry continued to face increasing challenges related to, among other things, solar panel manufacturing overcapacity (and limited demand for solar wafers, panels and modules), trade disputes centered on solar products, weaker operating performance by manufacturers and outlook, leading to the deterioration of the solar equipment market and our customers' financial condition. We concluded that these factors have significantly decreased the demand for our DSS products and we intend to discontinue any significant future investments in our DSS product line and expect limited future DSS sales. We considered the impact of these industry circumstances on our balance of DSS inventory and determined that there was inventory in excess of forecasted demand. As a result, we recorded a charge related to excess inventory of \$60.2 million during the three-months ended December 31, 2012 and during the same period we had to write off of all remaining PV vendor advances in an amount equal to \$8.4 million. In addition, there was a decrease in the average selling price and number of DSS units shipped as compared to the

nine-month period ended December 31, 2011. For the nine-month period ended December 31, 2012, the cost of equipment sold and fixed periodic costs exceeded revenue.

Our polysilicon gross margins for nine-month periods ended December 31, 2012 and December 31, 2011 were 40% and 44%, respectively. The decrease in polysilicon gross margins was primarily due to the mix of projects on which revenue was recognized with a greater amount of lower margin projects for which revenue was recognized in the nine-month period ended December 31, 2012. Revenue recognized in connection with contract terminations for our polysilicon business did not have a material impact on our margins for the nine-month period ended December 31, 2012.

Our sapphire business gross margins decreased to 5% for the nine-month period ended December 31, 2012, as compared to 32% for the nine-month period ended December 31, 2011. The decrease in sapphire gross margins for the nine-month period ended December 31, 2012 was primarily due to a decrease in the average selling price of our ASF systems as compared to the same period in the prior year, charges recorded during the nine month period ended December 31, 2012 for excess and obsolete inventory of \$5.2 million, the acceleration of depreciation of certain fixed assets totaling \$2.5 million and additional warranty costs associated with our ASF systems. In addition, the decrease was driven, in part, by lower factory utilization at our facility in Salem, Massachusetts. This decrease was also partially driven by a decrease in the market price of sapphire, resulting in a decrease of the average selling price of our sapphire materials as compared to the same period in the prior year. These decreases were offset in part by revenue recognized in connection with contract terminations for our sapphire business of \$5.6 million during the nine-month period ended December 31, 2012. There were no such amounts for the same period in the prior year. This revenue was recognized without any significant direct costs and increased margins for our sapphire business by approximately 10% for the nine-month period ended December 31, 2012.

*Operating Expenses.* The following table sets forth total operating expenses for the nine-month periods ended December 31, 2012 and December 31, 2011:

	Nine-Month Period Ended			
	December 31, 2012	December 31, 2011	Change	% Change
(dollars in thousands)				
Operating Expenses				
Research and development .....	\$ 55,401	\$ 34,624	\$ 20,777	60%
Sales and marketing .....	12,408	17,056	(4,648)	(27)%
General and administrative .....	44,362	48,947	(4,585)	(9)%
Contingent consideration expense .....	(9,492)	3,931	(13,423)	(341)%
Impairment of goodwill .....	57,037	—	57,037	100%
Restructuring charges and asset impairments .	33,441	—	33,441	100%
Amortization of intangible assets .....	7,619	5,652	1,967	35%
Total .....	<u>\$200,776</u>	<u>\$110,210</u>	<u>\$ 90,566</u>	<u>82%</u>

Operating expenses were \$200.8 million for the nine-month period ended December 31, 2012, as compared to \$110.2 million for the nine-month period ended December 31, 2011.

Research and development expenses consist primarily of materials, equipment and prototypes used in research and development as well as payroll and related costs, including stock-based compensation expense, for research and development personnel who design, develop, test and deploy our PV, polysilicon and sapphire equipment, materials and services. We expect to continue to invest in new product development and attempt to expand certain of our existing product bases, as well as our efforts to introduce certain new products. Research and development expenses increased 60% to \$55.4 million for the nine-month period ended December 31, 2012, as compared to \$34.6 million for the nine-month period ended December 31, 2011. The increase in research and development costs compared to the

nine-month period ended December 31, 2011 was driven primarily by projects related to our sapphire and PV businesses. The increases for the nine-month period ended December 31, 2012 primarily related to an increase in the amount of expenses allocated to research and development of \$12.4 million, primarily driven by activities in connection with our efforts to further develop and commercialize our HiCz™ product and continued development of our ASF product. In addition during the nine-month period ended December 31, 2012 there was an increase in outside service related costs of \$1.8 million, an increase in the use of non-production materials of \$2.9 million, an increase in costs associated with the disposal of certain fixed assets of \$1.3 million and an increase in depreciation expense of \$1.9 million, primarily as a result of capital expenditures made in prior periods.

Selling and marketing expenses consist primarily of payroll and related costs, stock-based compensation expense and commissions for personnel engaged in marketing, sales and support functions, as well as advertising and promotional expenses. Selling and marketing expenses decreased 27% to \$12.4 million for the nine-month period ended December 31, 2012, as compared to \$17.1 million for the nine-month period ended December 31, 2011. The decrease was primarily due to decreases of \$3.5 million in sales commissions as a result of a decrease in revenue, a decrease in payroll and payroll-related costs of \$0.9 million and a decrease in other selling and marketing expenses of \$0.6 million. Sales commissions are accrued based on operational factors such as deposits, shipments and final acceptances received from customers rather than when revenue is recognized and thus may vary from quarter to quarter. The decreases in sales and marketing expenses were offset, in part, by an increase in outside services expenses of \$0.8 million, driven primarily by activities in our sapphire business. Selling and marketing expenses related to Confluence Solar, which we acquired on August 24, 2011, were not material for the nine-month periods ended December 31, 2011 or December 31, 2012.

General and administrative expenses consist primarily of the following components: payroll, stock-based compensation expense and other related costs, including expenses for executive, finance, business applications, human resources and other administrative personnel; depreciation and amortization of property and equipment we use internally; fees for professional services; rent and other facility-related expenditures for leased properties; the provision for doubtful accounts; insurance costs; and non-income related taxes. The decrease in general and administrative expenses of 9% to \$44.4 million in the nine-month period ended December 31, 2012, as compared to \$48.9 million for the nine-month period ended December 31, 2011, was primarily due to a decrease in transaction-related expenses of \$3.4 million; a \$1.0 million decrease in payroll and payroll-related costs; a \$1.1 million decrease in bank charges and fees and a \$1.0 million decrease in office related supplies. In addition during the nine-month period ended December 31, 2012 there was an increase of \$3.7 million in the amount of expenses allocated to other functions. These decreases for the nine-month period ended December 31, 2012 were offset, in part, by an increase in depreciation expense of \$3.3 million driven primarily by expansion projects at our Merrimack, New Hampshire and Hazelwood, Missouri facilities; an increase of \$1.7 million in legal costs in connection with ongoing litigation and an increase of \$0.7 million in outside services. Included in general and administrative expenses for the nine-month periods ended December 31, 2012 are \$1.7 million of expenses related to Confluence Solar which was acquired on August 24, 2011.

*Contingent Consideration (Income) Expense.* Contingent consideration (income) expense consists of the accretion of our contingent consideration liabilities to their respective fair values. Contingent consideration income was recognized of \$9.5 million for the nine-month period ended December 31, 2012 as compared to \$3.9 million of contingent consideration expense for the nine-month period ended December 31, 2011. During the nine-month period ended December 31, 2012, based on the failure to satisfy certain operational and technical targets by the contractual target dates in connection with the Confluence Solar acquisition, we determined that the contingent consideration opportunities related to these targets were not achieved and we recognized a total decrease in the fair value of contingent consideration of \$8.2 million in the condensed consolidated statements of operations. In addition, we

recorded contingent consideration income of \$1.6 million in connection with a change in probabilities of the remaining contingent consideration targets in connection with the Confluence Solar acquisition. The remainder of the decrease for the nine-month period ended December 31, 2012, as compared to the respective period in the prior year, is due to the absence of contingent consideration expense recorded in the nine months ended December 31, 2012 related to Crystal Systems contingent consideration, which was fully paid in the quarter ended June 30, 2012.

*Restructuring Charges and Asset Impairments.* Total restructuring and asset impairment charges for the nine-month period ended December 31, 2012 were \$33.4 million. There were no comparable amounts in the prior year. As part of a program to reduce costs and increase operational efficiencies, we announced, on October 31, 2012, a plan to streamline worldwide operations to better align our cost structure with market conditions and enhance our ability to pursue strategic growth initiatives. This program included a 25% reduction in our global workforce. In connection with this plan, we incurred aggregate pre-tax restructuring charges of \$3.7 million comprised of severance, other termination benefits, substantially all of which will be paid in cash, and asset impairments.

On January 10, 2013, we announced a plan to cease operations at its Hazelwood, Missouri facility (“Hazelwood facility”). The idling of the Hazelwood facility is part of our efforts to reduce costs and optimize our research and development activities and the idling of the facility is expected to be completed on or before March 30, 2013. In connection with this action, we terminated the employment of 37 of the Hazelwood facility employees at various dates in the first quarter of fiscal 2013. We determined that as of December 31, 2012 it was probable that employees would be entitled to receive severance and related benefits and that these amounts were estimable and accordingly recorded the expense during the quarter ended December 31, 2012. In connection with the idling of the Hazelwood facility, we recorded \$29.8 million of restructuring and asset impairment expense during the quarter ended December 31, 2012 to the PV segment, comprised of \$0.5 million of severance and related benefits and \$29.3 million for the write-down to fair value of certain long-lived, intangible assets and other assets associated with the Hazelwood facility. We expect to complete the payments related to severance and related benefits in fiscal 2013. We further expect to incur approximately \$3 to \$4 million of additional expense, primarily lease exits costs, in 2013 related to the idling of the Hazelwood facility.

There are no comparable amounts for prior periods. For further details, see Note 11, *Restructuring and Asset Impairments*, of Notes to Consolidated Financial Statements for further information.

*Impairment of Goodwill.* We conducted our annual goodwill test for each of reporting units as of September 30, 2012. The results of the first step of the impairment test indicated that goodwill for each reporting unit was not impaired as of September 30, 2012. In light of challenges in the polysilicon, PV and sapphire (including LED) industries during the three months ended December 31, 2012, as further described under “Recent Developments” within Note 1 to the Consolidated Financial Statements included elsewhere in this Transition Report on Form 10-K, including, (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by us, (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of our customers, (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries, (iv) the deterioration of our customers financial condition, and (v) the sustained decline in our stock price and a significant decline in our financial outlook for the next few years, we determined that sufficient impairment indicators existed to require performance of an additional interim goodwill impairment analysis as of December 31, 2012.

Based on the results of our impairment test, the implied fair value of goodwill was substantially lower than the carrying value of goodwill for the PV reporting unit. As a result, we recorded a \$57.0 million goodwill impairment charge on December 31, 2012. Based on the results of the our analysis, there was no indication of an impairment of goodwill for the sapphire reporting unit.

The evaluation of goodwill for impairment requires the exercise of significant judgment. In the event of future changes in business conditions, we will be required to reassess and update our forecasts and estimates used in future impairment analyses. If the results of these analyses are lower than current estimates, a material impairment charge may result at that future time.

For further details, see Note 4, *Goodwill and Intangible Assets*, of Notes to Consolidated Financial Statements included elsewhere in this Transition Report on Form 10-K.

*Amortization Expense.* Amortization of intangible assets consists of the amortization of intangible assets obtained in business or technology acquisitions. Amortization expense attributed to intangible assets increased 35% to \$7.6 million for the nine-month period ended December 31, 2012, as compared to \$5.7 million for the nine-month period ended December 31, 2011. The increase was primarily due to an increase of \$3.0 million in amortization related to the Confluence Solar acquisition. This increase was offset by a decrease of \$0.9 million for the nine-month period ended December 31, 2012 in amortization expense attributed to the mix of intangible assets being amortized, as certain intangibles related to our PV business became fully amortized during fiscal 2012.

*Interest Income.* Interest income includes interest earned on invested cash and marketable securities. Interest income decreased to \$0.2 million for the nine-month period ended December 31, 2012, as compared to \$0.5 million for the nine-month period ended December 31, 2011. The decrease in interest income for the nine-month period ended December 31, 2012 was driven primarily by the returns earned on our invested cash, offset by an increase in our average cash balances during the nine-month period ended December 31, 2012. We typically invest our excess cash primarily in money market mutual funds.

*Interest Expense.* Interest expense includes interest paid on our debt obligations as well as amortization of deferred financing costs. Interest expense decreased to \$8.6 million for the nine-month period ended December 31, 2012, as compared to \$12.2 million for the nine-month period ended December 31, 2011. The decrease was due primarily to the lower interest rate on our Credit Facility with Bank of America N.A. (and certain other lenders) (which was entered into in January 2012) as compared to the one it replaced. In addition, during the three months ended July 2, 2011, we made a voluntary prepayment of \$20.0 million under our credit facility with Credit Suisse (which was subsequently terminated and repaid). In connection with this prepayment, we recorded a charge of \$0.9 million to accelerate a portion of the outstanding deferred financing fees under this credit facility. This decrease was offset, in part, by interest expense of \$4.5 million associated with our 3.00% Senior Convertible Notes which were issued on September 28, 2012. Included in interest expense for the nine-month period ended December 31, 2012 was \$1.1 million of charges for the amortization of deferred financing costs in connection with the 2012 Credit Facility with Bank of America N.A. (and certain other lenders) and our 3.00% Senior Convertible Notes. The balance of interest expense relates primarily to interest expense for the nine month period ended December 31, 2012 associated with the 2012 Credit Facility we entered into with Bank of America N.A. (and certain other lenders).

*Other net.* Other net, was \$1.0 million for the nine-month period ended December 31, 2012 as compared \$2.1 million for the nine-month period ended December 31, 2011. During the nine-month period ended December 31, 2012 we recorded a \$0.9 million charge to record foreign currency losses on the ineffective portion of our foreign currency exchange forward contracts as a result of changes in the payments of certain of our outstanding purchase obligation. During the nine-month period ended December 31, 2011, we recorded other income of \$3.3 million to reflect an appreciation of the fair value of an accelerated share repurchase contract over the settlement period of our accelerated share repurchase. This increase was offset in part by a \$1.4 million charge to record foreign currency losses on the ineffective portion of our foreign currency exchange forward contracts during the nine-month period ended December 31, 2011 as a result of changes in the payments of certain of our outstanding purchase obligation.

*(Benefit) Provision for Income Taxes.* Our world-wide effective tax rate was 8.8% (benefit) for the nine-month period ended December 31, 2012 and 32% for the nine-month period ended December 31, 2011. The effective tax rate for the nine months ended December 31, 2012, was impacted by nondeductible losses associated with goodwill in higher tax jurisdictions and deductible losses associated with inventory and fixed asset impairments in lower taxed jurisdictions. As a result, a greater share of the losses are not providing any tax benefit.

Changes in the mix of income before income taxes between the U.S. and foreign countries also impacted our effective tax rates. The majority of our revenue came from the Polysilicon segment which is taxed primarily in higher tax jurisdictions. Due to this jurisdictional mix of income/loss, we have current taxable income in the US, a higher tax jurisdiction while lower tax jurisdictions, namely Hong Kong, are reporting losses.

We file income tax returns in the U.S. federal jurisdiction and various state jurisdictions. We are subject to examination by federal, state, and foreign tax authorities. Our U.S. tax returns are currently in appeals for fiscal years ending March 31, 2007 and 2008 and we plan to vigorously defend all tax positions taken. We are also under examination by the Internal Revenue Service, or IRS, for our fiscal years ending March 28, 2009 and April 3, 2010. In addition, the statute of limitations is open for all state and foreign jurisdictions. As of December 31, 2012, we have classified approximately \$1,936 of unrecognized tax benefits as short-term. These unrecognized tax benefits relate to positions under appeals for the fiscal 2007 and fiscal 2008 tax years.

#### Fiscal Year Ended March 31, 2012 Compared to Fiscal Year Ended April 2, 2011

*Revenue.* The following table sets forth revenue for the fiscal years ended March 31, 2012 and April 2, 2011.

<u>Business Category</u>	<u>Fiscal Years Ended</u>			
	<u>March 31, 2012</u>	<u>April 2, 2011</u>	<u>Change</u>	<u>% Change</u>
			(dollars in thousands)	
Photovoltaic business .....	\$375,546	\$740,088	\$(364,542)	
Polysilicon business .....	363,278	143,591	219,687	
Sapphire business .....	216,881	15,305	201,576	
Total revenue .....	<u>\$955,705</u>	<u>\$898,984</u>	<u>\$ 56,721</u>	6%

Our total revenue increased 6% to \$955.7 million for the fiscal year ended March 31, 2012, as compared to \$899.0 million for the fiscal year ended April 2, 2011, primarily due to the commercialization of our ASF systems, increased demand in our polysilicon business, offset in part by a reduction in revenue from our PV business.

Revenue from our PV business decreased 49% to \$375.5 million for the fiscal year ended March 31, 2012 as compared to \$740.1 million for the fiscal year ended April 2, 2011. The decrease is primarily due to decreased demand for our DSS products from solar manufacturers, a trend that began in fiscal year 2012. The principal reason for the decrease was fewer DSS units shipped during the fiscal year ended March 31, 2012, which we believe was due to weaker demand as a result of excess capacity in the PV market. Our PV business is subject to fluctuations in demand for our PV products, particularly our DSS furnace. The impact of the reduction in shipments was offset in part by the recognition of revenue related to units that were shipped in prior periods.

Revenue from our polysilicon business increased by 153% to \$363.3 million for the fiscal year ended March 31, 2012 as compared to \$143.6 million for the fiscal year ended April 2, 2011. Polysilicon revenue for the fiscal year ended March 31, 2012 relates primarily to contracts that were in our order backlog as of April 2, 2011, for which the revenue recognition process has been completed. Polysilicon



revenue may fluctuate significantly from period to period due to the changes in supply and demand in the marketplace and the length of time it takes to complete our obligations under the contracts. As a result of this variability, our polysilicon business tends to have a higher level of deferred revenue than our other business segments. Approximately 94% and 65% of our deferred revenue balances at March 31, 2012 and April 2, 2011, respectively, relate to our polysilicon business.

Included in our backlog are certain polysilicon contracts that grant contractual rights which require revenue to be recognized ratably over the contract period. Revenue recognition from these contracts commences when all other elements have been delivered and other contract criteria have been met. During the fiscal years ended March 31, 2012 and April 2, 2011, we recognized revenue on a ratable basis from six of these contracts of \$185.0 million and \$83.5 million, respectively. As of March 31, 2012, our deferred revenue balance included \$128.8 million related to these contracts.

Our sapphire business revenue during the fiscal year ended March 31, 2012 is attributable to the sale of sapphire equipment and material used mostly, we believe, in sapphire-based LED applications and other specialty markets. We acquired Crystal Systems, which is the basis for our sapphire business, on July 29, 2010. Revenue from our sapphire business was \$216.9 million for the fiscal year ended March 31, 2012, as compared to \$15.3 million for the fiscal year ended April 2, 2011. The increase in revenue for our sapphire business is primarily related to the commercialization of our ASF systems during the fiscal year ended March 31, 2012. We began shipping and commissioning these units and recorded revenue in connection with meeting the revenue recognition criteria on certain of these ASF systems during fiscal 2012.

A substantial percentage of our revenue results from sales to a small number of customers. One of our customers accounted for 23% of our revenue for the fiscal year ended March 31, 2012 and one customer accounted for 19% of our revenue for the fiscal year ended April 2, 2011. No other customer accounted for more than 10% of our revenue during the respective periods.

*Gross Profit and Gross Margins.* The following tables set forth gross profit and gross margin for the fiscal years ended March 31, 2012 and April 2, 2011.

	Fiscal Years Ended			
	March 31, 2012	April 2, 2011	Change	% Change
	(dollars in thousands)			
Gross profit				
Photovoltaic business . . . . .	\$183,512	\$314,609	\$(131,097)	
Polysilicon business . . . . .	157,420	59,873	97,547	
Sapphire business . . . . .	85,868	3,513	82,355	
Total . . . . .	<u>\$426,800</u>	<u>\$377,995</u>	<u>\$ 48,805</u>	13%

	Fiscal Years Ended	
	March 31, 2012	April 2, 2011
Gross margins		
Photovoltaic business . . . . .	49%	43%
Polysilicon business . . . . .	43%	42%
Sapphire business . . . . .	40%	23%
Overall . . . . .	45%	42%

Overall gross profit as a percentage of revenue, or gross margin, increased for the fiscal year ended March 31, 2012 to 45% from 42% for the fiscal year ended April 2, 2011. The changes in gross margins primarily relate to our PV and sapphire businesses and are further discussed below.

Our gross margins in our PV, polysilicon and sapphire businesses tend to vary depending on the volume, pricing and timing of revenue recognition.

Our PV gross margins for the fiscal year ended March 31, 2012 were 49% , as compared to 43% for the fiscal year ended April 2, 2011. The increase for the fiscal year ended March 31, 2012 was due primarily to the timing of final acceptance on certain contracts during the fiscal year ended March 31, 2012, lower periodic costs and an increase in the average selling price of our DSS units. In addition, PV gross margins for the fiscal year ended March 31, 2012 included \$8.5 million of contract termination revenue with no associated costs. These increases were offset in part by a reduction in factory utilization and a reduction in sales volume of other PV equipment. In addition, gross margins for the fiscal year ended April 2, 2011 included revenue from a terminated turnkey project that generated a gross margin of approximately 17%.

Our polysilicon gross margins for fiscal years ended March 31, 2012 and April 2, 2011 were 43% and 42%, respectively. Revenue recognized in connection with contract terminations for our polysilicon business did not have a material impact on our margins for the fiscal year ended March 31, 2012. The increase in our polysilicon margins is primarily related to an increase in the number of projects on which revenue was recognized, off-set largely by a decrease in the costs associated with those projects.

Our sapphire business gross margins were 40% for the fiscal year ended March 31, 2012, as compared to 23% for the fiscal year ended April 2, 2011. The increase in gross margin for the sapphire business during the fiscal year ended March 31, 2012 is primarily related to the commercialization of our ASF systems. During the fiscal year ended March 31, 2012, we recorded, for the first time, revenues in connection with the sale of our sapphire equipment. Margins on the sale of our sapphire equipment are higher than our historical sapphire margins (which are attributable solely to sapphire material production and sales).

*Operating Expenses.* The following table sets forth total operating expenses for the fiscal years ended March 31, 2012 and April 2, 2011:

	Fiscal Years Ended			
	March 31, 2012	April 2, 2011	Change	% Change
	(dollars in thousands)			
Operating Expenses				
Research and development .....	\$ 49,872	\$ 23,753	\$26,119	110%
Sales and marketing .....	19,763	19,792	(29)	—
General and administrative .....	64,117	54,386	9,731	18%
Contingent consideration expense .....	4,458	2,262	2,196	97%
Amortization of intangible assets .....	8,198	4,500	3,698	82%
Total .....	<u>\$146,408</u>	<u>\$104,693</u>	<u>\$41,715</u>	<u>40%</u>

Operating expenses increased 40% to \$146.4 million for the fiscal year ended March 31, 2012, as compared to \$104.7 million for the fiscal year ended April 2, 2011.

Research and development expenses consist primarily of payroll and related costs, including stock-based compensation expense, for research and development personnel who design, develop, test and deploy our PV, polysilicon and sapphire equipment, materials and services. Research and development expenses increased 110% to \$49.9 million for the fiscal year ended March 31, 2012, as compared to \$23.8 million for the fiscal year ended April 2, 2011. The increase in research and development costs compared to the fiscal year ended April 2, 2011 was driven primarily by projects related to our

sapphire and PV businesses. The increases for the fiscal year ended March 31, 2012 primarily related to increases attributable to: non-production materials of \$14.2 million in connection with projects across all lines of business, payroll and payroll related costs of \$4.3 million primarily as a result of increased headcount at our US locations and the acquisition of Confluence Solar, costs associated with the disposal of fixed assets of \$0.9 million, shipping and receiving expenses of \$0.9 million, outside service related costs of \$0.8 million and increases of \$2.8 million in other research and development expenses. In addition, during the fiscal year ended March 31, 2012, there was a reduction in the amount of research and development resources allocated to customer related projects of \$2.2 million. Included in research and development expenses for the fiscal year ended March 31, 2012 are \$5.3 million of research and development costs related to Confluence Solar which was acquired on August 24, 2011.

Selling and marketing expenses consist primarily of payroll and related costs, stock-based compensation expense and commissions for personnel engaged in marketing, sales and support functions, as well as advertising and promotional expenses. Selling and marketing expenses remained flat at \$19.8 million for the fiscal year ended March 31, 2012 and the fiscal year ended April 2, 2011. Sales and marketing expenses for the fiscal year ended March 31, 2012 were primarily driven by a decrease in sales commissions of \$2.5 million, principally a result of fewer third party commissions in our PV business in connection with the decrease in PV revenue. This decrease was offset primarily by increases of \$1.2 million in payroll and payroll-related expenses due to increased headcount, an increase of \$1.0 million in other sales and marketing expenses and an increase of \$0.3 million in outside services. Sales commissions are accrued based on operational factors such as deposits, shipments and final acceptances received from customers rather than when revenue is recognized and thus may vary from quarter to quarter. Selling and marketing expenses related to Confluence Solar were not material for the fiscal year ended March 31, 2012.

General and administrative expenses consist primarily of the following components: payroll, stock-based compensation expense and other related costs, including expenses for executive, finance, business applications, human resources and other administrative personnel; and fees for professional services. The increase in general and administrative expenses of 18% to \$64.1 million in the fiscal year ended March 31, 2012, as compared to \$54.4 million for the fiscal year ended April 2, 2011, was primarily due to an increase in payroll and payroll-related costs of \$6.8 million primarily due to increased headcount; increases in facilities costs of \$5.9 million primarily related to activities at our Salem and Hazelwood pilot production facilities; an increase in transaction related costs of \$2.7 million primarily driven by our acquisition of Confluence Solar; and an increase in bad debt expense of \$0.7 million. These increases were offset primarily by an increase in the amount of general and administrative expenses allocated to other functional areas of \$4.6 million; a decrease in legal expenses of \$0.9 million, a decrease in tax consulting services of \$0.4 million and a decrease of \$1.6 million in other general and administrative expenses. Included in general and administrative expenses for the fiscal year ended March 31, 2012 are \$2.6 million of expenses related to Confluence Solar which was acquired on August 24, 2011.

*Contingent Consideration Expense.* Contingent consideration expense consists of the accretion of our contingent consideration liabilities to their respective fair values. Contingent consideration expense increased to \$4.5 million for the fiscal year period ended March 31, 2012, as compared to \$2.3 million for the fiscal year ended April 2, 2011. The increase was driven primarily by an increase in the fair value of the Crystal Systems earn-out and additional earn-out accretion expense in connection with the acquisition of Confluence Solar.

*Amortization Expense.* Amortization of intangible assets consists of the amortization of intangible assets obtained in business or technology acquisitions. Amortization expense attributed to intangible assets increased 82% to \$8.2 million for the fiscal year ended March 31, 2012, as compared to \$4.5 million for the fiscal year ended April 2, 2011. The increase was due to \$4.5 million in amortization related to the Confluence Solar acquisition and \$0.8 million from a full year of

amortization related to the acquisition of Crystal Systems in fiscal 2011. These increases are offset in part by a decrease of \$1.6 million for the year ended March 31, 2012 in amortization expense attributed to the mix of intangible assets being amortized, as certain intangibles related to our PV business became fully amortized during fiscal 2012.

*Interest Income.* Interest income includes interest earned on invested cash and marketable securities. Interest income decreased to \$0.5 million for the fiscal year ended March 31, 2012, as compared to \$0.6 million for the fiscal year ended April 2, 2011. The decrease in interest income for the fiscal year ended March 31, 2012 was driven primarily by the decreased returns earned on our invested cash, offset by an increase in our average cash balances during the fiscal year ended March 31, 2012. We typically invest our excess cash primarily in money market mutual funds. All of our available cash was deposited in cash accounts at our financial institutions as of March 31, 2012.

*Interest Expense.* Interest expense includes interest paid on our debt obligations as well as amortization of deferred financing costs. Interest expense increased to \$13.0 million for the fiscal year ended March 31, 2012, as compared to \$2.9 million for the fiscal year ended April 2, 2011. The increases were due primarily to interest expense and the amortization of deferred financing costs in connection with the termination of our credit facility that we entered into with Credit Suisse during fiscal 2011, which credit facility was subsequently terminated in November 2011. Included in interest expense for the fiscal year ended March 31, 2012 was \$9.6 million of non-cash charges for the amortization of deferred financing costs in connection with the Credit Suisse credit facility. The balance of interest expense relates primarily to interest expense associated with this Credit Suisse credit facility and the credit facility we entered into with Bank of America N.A. (and certain other lenders) in January 2012, as well as deferred financing costs under the Bank of America credit facility.

*Other, net.* Other income, net, was \$2.1 million for the fiscal year ended March 31, 2012 as compared to other expenses, net of \$0.4 million for the fiscal year ended April 2, 2011. During the fiscal year ended March 31, 2012, we recorded other income of \$3.3 million to reflect an appreciation of the fair value of the accelerated share repurchase contract over the settlement period of our accelerated share repurchase program. This increase was offset in part by a loss of \$1.4 million due to fair value adjustments on certain forward foreign exchange contracts that no longer qualified as a cash flow hedge because the hedging relationship was no longer deemed to be highly effective due to changes in the forecasted deliveries for certain euro denominated inventory purchase commitments.

*Provision for Income Taxes.* Our effective tax rate is based on our expectation of annual earnings from operations in the U.S. and other tax jurisdictions world-wide.

Our world-wide effective tax rate was 32% for the fiscal year ended March 31, 2012 and 35% for the fiscal year ended April 2, 2011. The effective tax rate is lower in the fiscal year ended March 31, 2012 when compared to the same period in the prior fiscal year, principally due to increased levels of income in lower tax jurisdictions. For the fiscal year ended March 31, 2012, 53% of income before tax was generated in foreign jurisdictions compared to 50% in the prior fiscal year. We commenced the transition of our global operations center to Hong Kong in the prior fiscal year, and as a result, the benefit of operating in the lower tax rate jurisdiction had a greater impact on reducing our effective tax rate for the year ended March 31, 2012 compared to the prior year. We continue to increase our activities in Asia to accommodate the sapphire equipment business as well as our global operations center to Hong Kong.

## **Liquidity and Capital Resources**

### **Overview**

We fund our operations generally through cash generated by operations, proceeds from our credit facilities and proceeds from exercises of stock awards.

Our combined cash and cash equivalents increased by \$67.2 million during the nine-month period ended December 31, 2012, from \$350.9 million as of March 31, 2012 to \$418.1 million as of December 31, 2012. On December 31, 2012, we held \$321.7 million of cash and cash equivalents in the United States by our U.S. subsidiaries and we held 96.4 million outside the U.S. held by our foreign subsidiaries. Our liquidity is affected by many factors, some based on the normal operations of our business and others related to the uncertainties of the industry and global economies.

For the nine-month period ended December 31, 2012, we incurred a loss from operations of \$146.7 million, a net loss of \$142.3 million, and used \$151.5 million in cash for operating activities. We expect that the challenges facing the polysilicon, photovoltaic and sapphire industries (as described above under *Factors Affecting the Results of Our Operations*) will continue through calendar year 2013. As a result, much of our business for calendar year 2013 is expected to result from filling orders in backlog and we do not expect any meaningful revenue from new contracts during 2013. As a result of the forgoing conditions, we anticipate that we would not be able to maintain compliance with the minimum interest coverage ratio and maximum leverage ratio (in our 2012 Credit Agreement with Bank of America N.A. and the other lenders) as of March 31, 2013 (or for the remainder of 2013).

On February 27, 2013, we (and certain subsidiaries), Bank of America N.A. and certain lenders agreed to amend (the “2013 Amendment”) certain provisions of the 2012 Credit Agreement, the relevant terms of which are described above under “Amendment to the 2012 Credit Agreement” and Note 10 to the consolidated financial statements included elsewhere in this Transition Report on Form 10-K. The 2013 Amendment waives the application of the leverage and interest coverage ratios through June 2014 (the “waiver period”) and requires us to comply with new financial covenants during the waiver period to maintain at all times minimum levels of liquidity, as defined, and quarterly cumulative minimum amounts of Consolidated Adjusted Earnings Before Interest, Tax, Depreciation and Amortization (as defined in the 2013 Amendment). Based on our forecasts, we expect to be in compliance with the revised financial covenants. In the event that we are unable to achieve our operating forecasts, we may be required to pay all outstanding amounts due under the 2012 Credit Agreement. Management believes that we have sufficient cash resources to fund operations for at least the next twelve months, including repayment of amounts outstanding under the 2012 Credit Agreement, if necessary.

On January 31, 2012, we, our U.S. operating subsidiary (the “U.S. Borrower”) and our Hong Kong subsidiary (the “Hong Kong Borrower”) entered into a credit agreement (the “2012 Credit Agreement”), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer (“Bank of America”) and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the “2012 Term Facility”) provided to the U.S. Borrower in an aggregate principal amount of \$75.0 million with a final maturity date of January 31, 2016, a revolving credit facility (the “U.S. Revolving Credit Facility”) available to the U.S. Borrower in an aggregate principal amount of \$25.0 million with a final maturity date of January 31, 2016 (pursuant to the 2013 Amendment, the U.S. Revolving Credit Facility is no longer available) and a revolving credit facility (the “Hong Kong Revolving Facility”; together with the U.S. Revolving Credit Facility, the “2012 Revolving Credit Facility”; together with the “Term Facility”, the “2012 Credit Facilities”) available to the Hong Kong Borrower in an aggregate principal amount of \$150.0 million (which amount was reduce to \$125 million pursuant to the 2013 Amendment) with a final maturity date of January 31, 2016. The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America’s prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00% (which rates are increased pursuant to the 2013 Amendment). As of December 31, 2012, the Company had approximately \$33.5 million of outstanding letters of credit pursuant to the 2012 Revolving Facilities resulting in approximately \$141.5 million of available credit under the 2012 Revolving Facilities (such availability is \$91.5 million after giving affect to the 2013 Amendment).

On September 28, 2012, we issued \$220.0 million aggregate principal amount of 3.00% Convertible Senior Notes due 2017 (the "Notes"). The net proceeds from the issuance of the Notes were approximately \$212.6 million, after deducting fees paid to the initial purchasers and other offering costs. The Notes are senior unsecured obligations, which pay interest in cash semi-annually at a rate of 3.00% per annum. The Notes are governed by an Indenture dated September 28, 2012 with U.S. Bank National Association, as trustee. The Notes are not redeemable by us.

In connection with the issuance of the Notes, we entered into separate convertible note hedge transactions and warrant transactions with certain counterparties. For additional information on the convertible note hedge transactions and warrant transactions, see Note 10 to the notes to our consolidated financial statements in Item 8 "Financial Statements" included elsewhere in this Transition Report on Form 10-K.

As noted above, our cash and cash equivalents balances increased by \$67.2 million during the nine-month period ended December 31, 2012, from \$350.9 million as of March 31, 2012 to \$418.1 million as of December 31, 2012. The increase was principally attributable to \$220.0 million of proceeds in connection with the issuance of the Notes, \$41.6 million in proceeds from the sale of warrants and an increase of \$70.0 million in connection with increasing our term loan under the 2012 Term Facility. These inflows were offset, in part, by a \$58.0 million payment for the purchase of bond hedges in connection with the Note offering, payments of \$25.2 million for the purchase of property, plant and equipment, payment of \$10.2 million to acquire certain capital assets and intellectual property of Twin Creeks Technologies, Inc. and the remainder of the amount was principally attributable to cash utilized in connection with working capital purchases. The following discussion of the changes in our cash balance refers to the various sections of our Consolidated Statements of Cash Flows, which appears in Item 8 of this Transition Report on Form 10-K. As noted above, pursuant to the terms of the 2013 Amendment, we agreed to pre-pay \$40 million under the term facility component of the 2012 Credit Agreement.

Net cash provided by operating and financing activities in each of the nine-month periods ended December 31, 2012, April 2, 2011 and April 3, 2010 has allowed us to fund our working capital requirements. We manage our cash inflows through the use of customer deposits and milestone billings that are intended to allow us in turn to meet our cash outflow requirements, which consist primarily of vendor payments and prepayments for contract related costs (raw material and components costs) and payroll and overhead costs. Customer deposits are initially classified as deposits, and then reclassified to deferred revenue when equipment has been shipped or services have been provided, but revenue has not yet been recognized. We generally make advance payments to suppliers after the corresponding deposit is received from our customers.

At December 31, 2012, we had \$418.1 million in cash and cash equivalents, of which \$96.4 million was held by certain of our foreign subsidiaries. We currently intend that cash and cash equivalents held by these foreign subsidiaries will be indefinitely reinvested in foreign jurisdictions in order to fund working capital requirements and repay debt (both third-party and inter-company) and, in the event we were to undertake certain strategic initiatives, we would use this cash for such strategic initiatives (such as investment, expansion and acquisitions) of our foreign subsidiaries in the normal course of business. Moreover, we do not currently intend to repatriate cash and cash equivalents held by foreign subsidiaries to the United States because cash generated from our domestic businesses and credit available under our credit agreement with Bank of America, N.A. are currently sufficient (and are expected to continue to be sufficient for at least the next 12 months) to fund the cash needs of our operations in the United States. However, if, in the future, cash and cash equivalents held by foreign subsidiaries are needed to fund our operations in the United States or for the purpose of making certain strategic investments in the United States, the repatriation of such amounts to the United States would result in a significant incremental tax liability in the period in which the decision to

repatriate occurs. Payment of any incremental tax liability would reduce the cash available to us to fund our operations by the amount of taxes paid.

Our principal uses of cash are for raw materials and components, wages, salaries and investment activities, such as the purchase of property, plant and equipment and servicing our debt obligations. We outsource a significant portion of our manufacturing and therefore we require minimal capital expenditures to meet our production demands. Our capital expenditures for our nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, were \$25.2 million, \$48.2 million, and \$31.3 million respectively, which were used primarily for improving our expanding product offerings, expanding certain of our facilities and business information systems. Our total capital expenditures in the twelve month period ending December 31, 2013 are expected to range from approximately \$10 million to approximately \$14 million, consisting primarily of research and development expenditures.

We believe that, after giving effect to the pre-payment of \$40 million pursuant to the 2013 Amendment, our existing cash, customer deposits and any borrowings under the 2012 Credit Agreement, including the 2012 Revolving Facility (as reduced by the 2013 Amendment) and proceeds from the Notes will be sufficient to satisfy working capital requirements, commitments for capital expenditures and other cash requirements for the foreseeable future, including at least the next twelve months.

### Cash Flows

The following discussion of the changes in our cash balance refers to the various sections of our consolidated statements of cash flows, which appears in Item 8 of this Transition Report on Form 10-K. The following table summarizes our primary sources and uses of cash in the periods presented:

	Nine-Month Period Ended		Fiscal Years Ended	
	December 31, 2012	December 31, 2011	March 31, 2012	April 2, 2011
	(dollars in thousands)			
<b>Cash provided by (used in):</b>				
Operating activities . . . . .	\$(151,478)	\$ 131,322	\$ 217,673	\$251,774
Investing activities . . . . .	(35,176)	(94,046)	(107,983)	(34,033)
Financing activities . . . . .	253,778	(193,323)	(121,643)	(85,948)
Effect of foreign exchange rates on cash . . . . .	68	176	107	208
Net increase (decrease) in cash and cash equivalents .	<u>\$ 67,192</u>	<u>\$(155,871)</u>	<u>\$ (11,846)</u>	<u>132,001</u>

### Cash Flows From Operating Activities

For the nine-month period ended December 31, 2012, our cash used in operations was \$151.5 million. Our cash used in operations was driven primarily by a decrease in customer deposits of \$151.0 million, a decrease in deferred revenue of \$74.2 million and a decrease in income taxes payable of \$14.9 million, a net loss of \$142.3 million and an increase in inventories of \$43.1 million (excluding the effect of inventory write-offs). These amounts were offset by non-cash inventory write-offs of \$68.6 million, non-cash impairment of goodwill of \$57.0 million, a decrease in deferred costs of \$46.4 million, a decrease in accounts receivable \$41.5 million, non-cash asset impairments of \$30.3 million and a write-off of all remaining PV vendor advances of \$8.4 million.

For the nine months ended December 31, 2011, our cash provided by operations was \$131.3 million. Our cash flow from operations was driven primarily by net income of \$104.3 million, an increase in customer deposits of \$161.4 million due to new orders in our polysilicon and sapphire equipment businesses and a decrease in accounts receivable of \$35.1 million. These items were partially

offset by an increase in restricted cash of \$96.2 million related to cash collateralization of outstanding letters of credit, an increase in inventories of \$79.9 million, an increase in vendor advances of \$56.3 million, and a decrease in accounts payable and accrued expenses of \$9.1 million.

For the fiscal year ended March 31, 2012, our cash provided by operations was \$217.7 million. Our cash flow from operations was driven primarily by net income of \$183.4 million, an increase in customer deposits of \$187.6 million due to new orders received during the fiscal year ended March 31, 2012 in our polysilicon and sapphire equipment businesses and a decrease in accounts receivable of \$20.2 million. These items were partially offset by an increase in inventories of \$75.8 million, an increase in vendor advances of \$68.6 million, a decrease in deferred revenue of \$249.4 million and a decrease in accounts payable and accrued expenses of \$45.4 million.

For the fiscal year ended April 2, 2011, our cash provided by operations was \$251.8 million. Our cash flow from operations was driven by net income of \$174.8 million, an increase in customer deposits of \$23.8 million in our PV, polysilicon and sapphire businesses, an increase in deferred revenue less deferred costs of \$54.3 million, as well as an increase in accounts payable and accrued expenses of \$60.5 million. These items were partially offset by an increase in inventories and vendor advances of \$60.3 million and an increase in accounts receivable of \$33.0 million.

#### *Cash Flows From Investing Activities*

For the nine-month period ended December 31, 2012, our cash used in investing activities was \$35.2 million. The acquisition of certain select assets of Twin Creeks Technologies, Inc., consumed approximately \$10.2 million of cash. Additionally, capital expenditures for this nine month period were approximately \$25.2 million. These capital expenditures were primarily used for expanding our product offerings in the PV business (including developing our HiCz™ equipment technology).

For the nine months ended December 31, 2011, our cash used in investing activities was \$94.0 million. The acquisition of Confluence Solar, net of cash acquired and purchase price adjustment, consumed approximately \$60.4 million of cash. Additionally, capital expenditures for the period were approximately \$34.0 million. These capital expenditures were primarily used for expanding our product offerings in the PV business (including developing our HiCz™ technology) and sapphire business and improving our business information systems.

For the fiscal year ended March 31, 2012, our cash used in investing activities was \$108.0 million. The acquisition of Confluence Solar, net of cash acquired and purchase price adjustment, consumed approximately \$60.4 million of cash. Additionally, capital expenditures for the period were approximately \$48.2 million. These capital expenditures were primarily used for expanding our product offerings in the PV business (including developing our HiCz™ equipment technology) and sapphire business and improving our business information systems.

For the fiscal year ended April 2, 2011, our cash used in investing activities was \$34.0 million. The acquisition of Crystal Systems, net of cash acquired, used approximately \$22.8 million of cash. Capital expenditures were approximately \$31.3 million and were primarily used for expanding our sapphire business facility and improving our business information systems. These items were partially offset by the proceeds from sale of \$20.0 million of short-term investments.

#### *Cash Flows From Financing Activities*

For the nine-month period ended December 31, 2012, cash provided by financing activities was \$253.8 million, driven primarily by \$220 million of proceeds in connection with the issuance of our 3.0% senior convertible notes due 2017, \$41.6 million in proceeds from the sale of warrants (in connection with the issuance of such convertible notes) and an increase of \$70.0 million in connection with increasing our term loan with Bank of America. This cash provided by financing activities was



offset, in part by the following; a \$58.0 million payment for the purchase of bond hedges in connection with the offering of our 3.0% senior convertible notes due 2017; \$8.6 million of transactions costs associated with the offering of our 3.0% senior convertible notes due 2017 and the amendment to our 2012 Credit Facility in June 2012; \$5.4 million in principal payments in connection with our 2012 Term Facility; the payment of our contingent consideration obligation in connection with the acquisition of Crystal Systems, of which \$4.5 million was recorded as a financing activity. With respect to the contingent consideration payment, this was the final contingent consideration obligation in connection with the Crystal Systems acquisition.

For the nine months ended December 31, 2011, cash used in financing activities was \$193.3 million, driven primarily by principal payments made under our credit facility with Credit Suisse of \$120.3 million. Of these principal payments, \$9.4 million related to scheduled principal payments under the credit facility. In addition, \$20.0 million represents an additional voluntary principal prepayment made by us on June 15, 2011. Finally, we terminated this credit facility with Credit Suisse in November 2011 and made a principal payment of \$90.9 million to settle the final amounts owed under the credit facility.

On November 18, 2011, we entered into an accelerated share repurchase agreement with UBS AG, under which we repurchased \$75.0 million of our common stock. The total number of shares of our common stock received by us was 9.4 million.

For the fiscal year ended March 31, 2012, cash used in financing activities was \$121.6 million, driven primarily by principal payments made under our Credit Suisse Credit Agreement of \$120.3 million. Of these principal payments, \$9.4 million related to scheduled principal payments under this Credit Suisse Credit Agreement. In addition, \$20.0 million represents an additional voluntary principal prepayment made by us to Credit Suisse on June 15, 2011. We terminated the Credit Suisse Credit Agreement in November 2011 and made a principal payment of \$90.9 million to settle the final amounts owed under that credit facility. On November 18, 2011, we entered into an accelerated share repurchase agreement with UBS AG, under which we repurchased \$75.0 million of our common stock. The total number of shares of our common stock received by us was 9.4 million.

During the fiscal year ended March 31, 2012, we paid \$4.9 million in connection with the achievement of certain of our contingent consideration obligations to the former shareholders of Crystal Systems. A portion of this payment has been classified as an operating cash outflow pursuant to the accounting guidance for business combinations. These amounts were offset by the receipt of \$75.0 million in connection with entering into the 2012 Credit Agreement with Bank of America and the lenders from time to time party thereto, as well as the receipt of \$10.6 million of proceeds and related excess tax benefits in connection with the exercise of outstanding stock options.

For the fiscal year ended April 2, 2011, cash used by financing activities was \$85.9 million, driven primarily by the repurchase of our common stock from GT Solar Holdings, LLC (a company that formerly held more than a majority of the shares of our outstanding common stock and which company was controlled by investment funds affiliated with Oaktree Capital Management, L.P.), which was offset in part by proceeds received pursuant to the Credit Suisse Credit Agreement. In March 2011, we paid \$3.5 million in connection with the achievement of certain targets of our contingent consideration obligation to the former shareholders of Crystal Systems. A portion of this payment has been classified as an operating cash outflow pursuant to the accounting guidance for business combinations.

On November 12, 2010, we repurchased 26.5 million shares of our common stock from GT Solar Holdings, LLC at a per share price of \$7.66, or an aggregate of approximately \$203.5 million. The source of funds for the repurchase of these shares of common stock was our available cash.

On December 13, 2010, we entered into the Credit Suisse Credit Agreement, which consisted of a term facility in an aggregate principal amount of \$125.0 million with a final maturity date of

December 13, 2013 and a revolving facility in an aggregate principal amount of \$75.0 million with a final maturity date of December 13, 2013. The full amount of the term facility was drawn by us on December 13, 2010 and no amounts were drawn on the revolving facility. After payment of fees related to the Credit Suisse Credit Agreement we received approximately \$115.0 million in connection with the term facility. In March 2011, we made a principal payment of \$4.7 million in connection with the term facility. The Credit Suisse Credit Agreement was subsequently terminated in November 2011.

### ***Long Term Debt***

#### ***Bank of America Credit Agreement***

On January 31, 2012, we, our U.S. operating subsidiary (the “U.S. Borrower”) and our Hong Kong subsidiary (the “Hong Kong Borrower”) entered into a credit agreement (the “2012 Credit Agreement”), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer (“Bank of America”) and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the “2012 Term Facility”) provided to the U.S. Borrower in an aggregate principal amount of \$75.0 million with a final maturity date of January 31, 2016, a revolving credit facility (the “U.S. Revolving Credit Facility”) available to the U.S. Borrower in an aggregate principal amount of \$25.0 million with a final maturity date of January 31, 2016 (pursuant to the 2013 Amendment, the U.S. Revolving Credit Facility is no longer available) and a revolving credit facility (the “Hong Kong Revolving Facility”; together with the U.S. Revolving Credit Facility, the “2012 Revolving Credit Facility”; together with the “Term Facility”, the “2012 Credit Facilities”) available to the Hong Kong Borrower in an aggregate principal amount of \$150.0 million with a final maturity date of January 31, 2016 (which amount was reduced to \$125 million pursuant to the 2013 Amendment). The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America’s prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00% (which rates are increased pursuant to the 2013 Amendment). As of December 31, 2012, we had approximately \$33.5 million of outstanding letters of credit pursuant to the 2012 Revolving Facilities resulting in approximately \$141.5 million of available credit under the 2012 Revolving Facilities (such availability is \$91.5 million after giving affect to the 2013 Amendment). As of December 31, 2012, there was \$139.6 million outstanding under the 2012 Term Facility (pursuant to the 2013 Amendment we pre-paid \$40 million of the 2012 Term Facility, which payment did not reduce the amortization of the 2012 Term Facility). As of December 31, 2012, we were in compliance with the covenants contained in the 2012 Credit Agreement.

On February 27, 2013, the Company (our U.S. and Hong Kong operating subsidiaries), Bank of America N.A. and certain lenders agreed to amend certain provisions of the 2012 Credit Agreement (the “2013 Amendment”). The 2013 Amendment waives the application of the leverage and interest coverage ratios though June 2014 (the “waiver period”). Through this action we avoid the possibility of a breach to these covenants. In addition, the 2013 Amendment provides that (i) we pay down the term facility by \$40 million (leaving a balance of \$100 million for the term facility), (ii) the interest rate payable on the loan is increased by 1.5% (which increase drops to 0.75% after the waiver period), (iii) the revolving credit facility for our US operating subsidiary be eliminated and reduces the revolving credit facility available to our Hong Kong subsidiary to \$125 million (and providing that such amounts may only be used for letters of credit during the waiver period), (iv) the Company comply with new covenants during the waiver period to maintain at all times minimum levels of liquidity (as defined in the 2013 Amendment), and quarterly cumulative minimum amounts of Consolidated Adjusted Earnings Before Interest, Tax, Depreciation and Amortization (as defined in the 2013 Amendment), (v) certain other covenants are revised, including with respect to restrictions on the incurrence of certain additional debt, making certain investment, affiliate transactions and further restrictions on the payment of dividends and stock repurchases (as described in the 2013 Amendment), (vi) we pay certain fees to the Lenders and (vii) that certain subsidiaries of the Hong Kong subsidiary

will provide guarantees and collateral to support the Hong Kong Revolving Credit Facility. In addition, the undrawn fee payable on the undrawn portion of the revolving commitments increases from 0.50% to 0.75%. A copy of the 2013 Amendment is attached to this Transition Report on Form 10-K as Exhibit 10.86.

For additional information on the 2012 Credit Agreement, as amended, refer to Note 10 of the notes to the consolidated financial statements included elsewhere in this Transition Report on Form 10-K.

### ***3.00% Convertible Senior Notes due 2017***

On September 28, 2012, we issued \$220.0 million aggregate principal amount of 3.00% Convertible Senior Notes due 2017 (the "Notes"). The net proceeds from the issuance of the Notes were approximately \$212.6 million, after deducting fees paid to the initial purchasers and other offering costs. The Notes are our senior unsecured obligations, which pay interest in cash semi-annually (on April 1 and October 1 of each year) at a rate of 3.00% per annum beginning on April 1, 2013. The Notes are governed by an Indenture dated September 28, 2012 with U.S. Bank National Association, as trustee (the "Indenture"). The Notes are not redeemable by us.

The Notes will mature on October 1, 2017, unless earlier repurchased or converted in accordance with their terms prior to such date. The Notes may be converted, under the conditions specified below, based on an initial conversion rate of 129.7185 shares of common stock per \$1,000 principal amount of Notes (which represents an initial effective conversion price of the Notes of \$7.71 per share), subject to adjustment as described in the Indenture.

In accordance with accounting guidance for debt with conversion and other options, we accounted for the liability and equity components of the Notes separately. The estimated fair value of the liability component at the date of issuance was \$154,884 and was computed based on the fair value of similar debt instruments that do not include a conversion feature. The equity component of \$65,116 was recognized as a debt discount and represents the difference between the \$220,000 of gross proceeds from the issuance of the Notes and the \$154,884 estimated fair value of the liability component at the date of issuance.

Issuance costs of \$7,408 related to the issuance of the Notes were allocated to the liability and equity components in proportion to the allocation of the proceeds and accounted for as capitalized debt issuance costs and equity issuance costs, respectively.

For additional information on the Notes, refer to Note 10 of the notes to the consolidated financial statements included elsewhere in this Transition Report on Form 10-K.

### ***Convertible Note Hedge Transactions and Warrant Transactions***

In connection with the offering of the Notes, we entered into separate convertible note hedging transactions and warrant transactions with multiple counterparties.

Pursuant to the convertible note hedges, we purchased call options on our common stock, under which we have the right to acquire from the counterparties up to 28.5 million shares of our common stock, or an equivalent amount in cash or a combination of cash and shares, subject to customary anti-dilution adjustments, at a strike price of \$7.71, that is equal to the initial conversion price of the Notes. Our exercise rights under the call options trigger upon conversion of the Notes and the call options terminate upon the maturity of the Notes, or the first day the Notes are no longer outstanding. The convertible note hedges may be settled in cash, shares of our common stock, or a combination thereof, at our option, and are intended to reduce our exposure to potential cash payments or potential dilution upon conversion of the Notes. We paid \$57.9 million for the convertible note hedges.

We also sold warrants to multiple counterparties that provide the counterparties rights to acquire from us up to approximately 28.5 million shares of our common stock. The strike price of the warrants will initially be \$9.9328 per share, which is 67.5% above the last reported sale price of our common stock on September 24, 2012. The warrants expire incrementally on a series of expiration dates following the maturity dates of the Notes. At expiration, if the market price per share of our common stock exceeds the strike price of the warrants, we will be obligated to issue shares of our common stock having a value equal to such excess. The warrants could have a dilutive effect on earnings per share to the extent that the market value per share of the our common stock exceeds the strike price of the warrants. Proceeds received from the warrant transactions totaled \$41.6 million.

### **Derivatives and Hedging Activities**

We enter into foreign currency forward exchange contracts to hedge certain cash flow exposures from the impact of changes on foreign currency exchange rates. These forward foreign exchange contracts are entered into in connection with certain foreign currency denominated inventory purchases made in the normal course of business and accordingly are not speculative in nature.

As of December 31, 2012, we had euro denominated forward foreign exchange contracts with notional amounts of €5.5 million, or \$7.1 million, that qualified as cash flow hedges. These contracts had a combined fair value asset of \$0.2 million as of December 31, 2012. These contracts typically expire within 12 months of the date on which they are entered into.

During the nine-month period ended December 31, 2012, we recorded other expense of \$0.9 million in connection with ineffective portions of certain foreign currency forward exchange contracts.

Changes in the fair value of our cash flow hedges are recognized in stockholders' equity as a component of accumulated other comprehensive loss as these financial instruments qualify for hedge accounting.

### **Off-Balance Sheet Arrangements**

We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As such, we are not exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such relationships.

#### *Standby Letters of Credit*

As of December 31, 2012, we had \$33.5 million of standby letters of credit outstanding against the 2012 Revolving Credit Facilities (which are a component of the 2012 Credit Agreement we entered into with Bank of America N.A. and certain other lenders in January 2012) which represented performance guarantees issued against customer deposits. These standby letters of credit are scheduled to expire within the next twelve months and have not been included in the consolidated financial statements included herein.

### **Contractual Obligations and Commercial Commitments**

Under generally accepted accounting principles as used in the United States, some obligations and commitments are not required to be included in the consolidated balance sheets and statements of income. These obligations and commitments, while entered into in the normal course of business, may have a material impact on liquidity.

The following table reflects our contractual obligations and commercial commitments as of December 31, 2012:

	Payments due by period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
	(dollars in thousands)				
Operating lease obligations(a) . . . . .	\$ 21,487	\$ 4,932	\$ 5,080	\$ 3,139	\$ 8,336
Purchase commitments under agreements(b) . .	214,611	211,229	3,382	—	—
Contingent consideration obligations(c) . . . . .	50,085	10,085	3,740	8,916	27,344
Long term debt obligations(d) . . . . .	359,563	7,250	27,188	325,125	—
Interest obligations(d) . . . . .	46,182	11,347	21,062	13,773	—
Other long-term liabilities(e)(f) . . . . .	4,174	—	354	—	3,820
Total . . . . .	\$696,102	\$244,843	\$60,806	\$350,953	\$39,500

- (a) These amounts represent our minimum operating lease payments due under non-cancellable operating leases as of December 31, 2012. For additional information about our operating leases, refer to Note 14, *Commitments and Contingencies*, of the Notes to Consolidated Financial Statements included elsewhere in this Transition Report on Form 10-K.
- (b) Purchase commitments under agreements relate to arrangements entered into with suppliers of polysilicon, PV and sapphire raw materials and ancillary equipment. These agreements specify future quantities and pricing of products to be supplied by the vendors and we may be subject to a financial penalty, including forfeiting any deposits and other costs in the event that we terminate the arrangements. Certain portions of the purchase commitments are satisfied in advance of the delivery of goods in the form of prepayments, which are then offset against future orders upon delivery. As of December 31, 2012, our outstanding prepayments under certain of these purchase commitments amounted to \$53.1 million.
- (c) Consists of contingent payments, which have not been risk adjusted or discounted, that we may be obligated to pay to the former shareholders of Confluence Solar and Twin Creeks based on the full achievement of remaining contingent consideration targets.
- (d) Amounts relate to principal and interest obligations under our credit agreement with Bank of America and certain other lenders that we entered into in January 2012, as well as the principal amount due under our 3.00% Senior Convertible Notes due 2017. For additional information about our long-term debt, refer to Note 10, *Long-Term Debt and Revolving Credit Facility*, of the Notes to the Consolidated Financial Statements included elsewhere in this Transition Report on Form 10-K. Pursuant to an amendment dated February 27, 2013, to our Credit Agreement with Bank of America N.A., we have agreed to pre-pay \$40 million of the term loan (which payments did not reduce the amortization of the term loan) and a balance of \$100 million principal amount remained outstanding following this pre-payment.
- (e) Other long-term liabilities reflected on our consolidated balance sheet are for a liability related to asset retirement obligations and long-term employee incentive payments. Amounts related to asset retirement obligations represent the amounts expected to be paid in the future based on our current estimates of the costs to complete our obligations.
- (f) Liabilities for unrecognized income tax benefits, and the associated interest and penalties, of \$28.2 million as of December 31, 2012 are not included in the table above as we are uncertain as to if or when such amounts may be settled.

## ***Recent Accounting Pronouncements***

### ***Recently Adopted Accounting Pronouncements***

In June 2011, the Financial Accounting Standards Board or FASB issued Accounting Standards Update No. 2011-05, *Presentation of Comprehensive Income*. This standard eliminates the previous option to report other comprehensive income and its components in the statement of changes in stockholders' equity. The amendment requires that all non-owner changes in stockholders' equity be presented either in a single statement of comprehensive income or in two separate but consecutive statements. The standard is intended to enhance comparability between entities that report under U.S. GAAP and those that report under International Financial Reporting Standards, and to provide a more consistent method of presenting non-owner transactions that affect an entity's equity. The amendments in this update are to be applied retrospectively. The Company adopted this standard in the quarter ended June 30, 2012. We elected to present the statement of comprehensive (loss) income as a consecutive, separate statement.

## **Item 7A. *Quantitative and Qualitative Disclosures about Market Risk***

### **Investment Risks**

We maintain an investment portfolio which, at December 31, 2012, consisted of \$200.0 million of money market mutual funds. At any time a rise in market interest rates could have an adverse impact on the fair value of our investment portfolio. Conversely, declines in market interest rates could have a material impact on the interest earnings of our investment portfolio. We do not currently hedge these interest rate exposures. We place our investments with high quality issuers and have investment policies limiting, among other things, the amount of credit exposure to any one issuer. We seek to limit default risk by purchasing only investment grade securities. Based on investment positions as of December 31, 2012, a hypothetical movement of plus or minus 50 basis points based on current market interest rates would not have a material impact to the value of our investment portfolio or the income earned in an annual period. We also have the ability to hold our investments until maturity, and therefore do not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest rates on our investment portfolio.

We may elect to invest a significant amount of our cash in fixed income portfolios. As with most fixed income portfolios, the ones that we have invested in from time to time, or may elect to invest in, include overnight money market funds, government securities, certificates of deposit, commercial paper of companies and other highly-liquid securities that are believed to be low-risk. Certain money market funds in which we have invested, however, could hold positions in securities issued by both sovereign states and banks located in jurisdictions experiencing macroeconomic instability, some of which may not currently be considered low-risk. Certain sovereign states and banks located in these jurisdictions, have experienced severe disruptions lately, in part, from the belief that they may be unable to repay their debt, and the value of the securities issued by these institutions have experienced volatility. While we do not believe that we have any direct exposure to the riskiest securities, for example, we do not directly hold any securities issued by the governments of Greece, Spain, Portugal, France and Ireland, the funds that we may invest in may hold these securities. In addition, these money market funds could hold Euros or Euro-based securities. To the extent that volatility was to have a significant impact on the Euro, a portion of any cash held in money market accounts could lose its value. Further, if the financial upheavals were to spread to other sovereign states, such as the United Kingdom, our cash could also be at risk due to the fact that the funds in which we have placed our cash do invest directly in the securities issued by the sovereign states, corporations and banks in these jurisdictions.

## **Foreign Currency Risk**

Although our reporting currency is the U.S. dollar and substantially all of our existing sales contracts are denominated in U.S. dollars, we incur costs denominated in other currencies. In addition, although we maintain our cash balances primarily in the U.S. dollar, from time to time, we maintain cash balances in currencies other than the U.S. dollar. As a result, we are subject to currency risk.

Our primary foreign currency exposure relates to fluctuations in foreign currency exchange rates, primarily the euro for certain inventory purchases from vendors located in Europe. Fluctuations in exchange rates could affect our gross and net profit margins and could result in foreign exchange and operating losses or gains due to such volatility. Changes in the customer's delivery schedules can affect related payments to our vendors which could cause fluctuations in the cash flows and when we expect to make payments when these cash flows are realized or settled.

Exchange rates between a number of currencies and U.S. dollars have fluctuated significantly over the last few years and future exchange rate fluctuations may occur.

We enter into forward foreign currency exchange contracts that qualify as cash flow hedges to hedge portions of certain of our anticipated foreign currency denominated inventory purchases. These contracts typically expire within 12 months. Consistent with the nature of the economic hedges provided by these forward foreign currency exchange contracts, increases or decreases in their fair values would be effectively offset by corresponding decreases or increases in the U.S. dollar value of our future foreign currency denominated inventory purchases (i.e., "hedged items"). The information provided below relates only to the hedging instruments and does not represent the corresponding changes in the underlying hedged items.

As of December 31, 2012, we had forward foreign currency exchange contracts with notional amounts of €5.5 million, all of which expire within twelve months. As of December 31, 2012, the fair value and carrying amount of our forward foreign currency exchange contracts was a net asset of \$0.2 million. During the nine-month period ended December 31, 2012, we recorded a \$0.9 million charge for foreign currency losses on the ineffective portion of our foreign currency exchange forward contracts as a result of changes in the timing of payments of certain of our outstanding purchase obligations.

Relative to our foreign currency exposures existing at December 31, 2012, a 10% appreciation (depreciation) of the Euro against the U.S. dollar would result in an increase (decrease) in the fair value of these derivative instruments of approximately \$0.7 million.

## **Interest Rate Risk**

### ***Bank of America Credit Agreement***

On January 31, 2012, we, our U.S. operating subsidiary and our Hong Kong subsidiary entered into the 2012 Credit Agreement, with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer and the lenders from time to time party thereto, which was subsequently amended. For additional information on the 2012 Credit Agreement, see Note 10 to notes to our consolidated financial statements included elsewhere in this Transition Report on Form 10-K.

As of December 31, 2012, there was \$116.5 million and \$25.0 million available for borrowing under the Hong Kong Revolving Facility and U.S. Revolving Facility, respectively. In connection with the amendment to the 2012 Credit Agreement, the U.S. Revolving Credit Facility was reduced to zero and no amounts will be available thereunder.

If the LIBOR rate increases/decreases by 100 basis points from that in effect at December 31, 2012, our annual interest expense would correspondingly increase/decrease by approximately \$1.4 million.

### ***3.00% Convertible Senior Notes due 2017***

On September 28, 2012, we issued \$220 million aggregate principal amount of our 3.00% Convertible Senior Notes due 2017, or the Notes. The Notes were issued under the indenture with U.S. Bank National Association, as trustee, dated September 28, 2012. For additional information on the 2012 Credit Agreement, see Note 10, *Long-Term Debt and Revolving Credit Facility*, to our consolidated financial statements in Item 8 “Financial Statements” included elsewhere in this Transition Report on Form 10-K.

The interest rate on the Notes is fixed at 3.0% per annum. The fair market value of the Notes is subject to interest rate risk and market risk due to the convertible feature of the Notes. Generally, the fair market value of fixed interest rate debt will increase as interest rates fall and decrease as interest rates rise. The fair market value of the Notes will also increase as the market price of our stock increases and decrease as the market price falls. The interest and market value changes affect the fair market value of the Notes but do not impact our financial position, cash flows or results of operations.



**Item 8. *Financial Statements and Supplementary Data***

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**GT Advanced Technologies Inc.**  
**Consolidated Balance Sheets**  
(In thousands, except per share data)

	<u>December 31,</u> <u>2012</u>	<u>March 31,</u> <u>2012</u>
<b>Assets</b>		
Current assets:		
Cash and cash equivalents . . . . .	\$ 418,095	\$ 350,903
Accounts receivable, net . . . . .	23,829	65,676
Inventories . . . . .	133,286	193,295
Deferred costs . . . . .	30,248	91,740
Vendor advances . . . . .	32,440	85,396
Deferred income taxes . . . . .	28,309	13,857
Refundable income taxes . . . . .	1,516	1,516
Prepaid expenses and other current assets . . . . .	9,168	12,117
Total current assets . . . . .	676,891	814,500
Property, plant and equipment, net . . . . .	77,980	99,982
Other assets . . . . .	86,920	20,306
Intangible assets, net . . . . .	90,516	86,357
Deferred costs . . . . .	24,423	9,293
Goodwill . . . . .	46,052	102,152
Total assets . . . . .	<u>\$1,002,782</u>	<u>\$1,132,590</u>
<b>Liabilities and stockholders' equity</b>		
Current liabilities:		
Current portion of long-term debt . . . . .	\$ 7,250	\$ 3,750
Accounts payable . . . . .	44,848	34,323
Accrued expenses . . . . .	30,928	37,074
Contingent consideration . . . . .	4,901	16,071
Customer deposits . . . . .	111,777	334,098
Deferred revenue . . . . .	86,098	165,149
Accrued income taxes . . . . .	21,716	37,620
Total current liabilities . . . . .	307,518	628,085
Long-term debt . . . . .	132,313	71,250
Convertible notes . . . . .	157,440	—
Deferred income taxes . . . . .	22,573	38,918
Customer deposits . . . . .	71,340	—
Deferred revenue . . . . .	35,848	31,010
Contingent consideration . . . . .	5,414	6,402
Other non-current liabilities . . . . .	2,323	547
Accrued income taxes . . . . .	25,762	24,824
Total liabilities . . . . .	760,531	801,036
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Preferred stock, 10,000 shares authorized, none issued and outstanding . . . . .	—	—
Common stock, \$0.01 par value; 500,000 shares authorized, 119,293 and 118,331 shares issued and outstanding as of December 31, 2012 and March 31, 2012, respectively . . . . .	1,193	1,183
Additional paid-in capital . . . . .	183,565	131,563
Accumulated other comprehensive income (loss) . . . . .	806	(187)
Retained earnings . . . . .	56,687	198,995
Total stockholders' equity . . . . .	242,251	331,554
Total liabilities and stockholders' equity . . . . .	<u>\$1,002,782</u>	<u>\$1,132,590</u>

The accompanying notes are an integral part of these consolidated financial statements.

**GT Advanced Technologies Inc.**  
**Consolidated Statements of Operations**  
(In thousands, except per share data)

	Nine-Month Period Ended December 31, 2012	Fiscal Years Ended	
		March 31, 2012	April 2, 2011
Revenue .....	\$ 379,646	\$955,705	\$898,984
Cost of revenue .....	325,570	528,905	520,989
Gross profit .....	54,076	426,800	377,995
Operating expenses:			
Research and development .....	55,401	49,872	23,753
Sales and marketing .....	12,408	19,763	19,792
General and administrative .....	44,362	64,117	54,386
Contingent consideration (income) expense .....	(9,492)	4,458	2,262
Impairment of goodwill .....	57,037	—	—
Restructuring charges and asset impairments .....	33,441	—	—
Amortization of intangible assets .....	7,619	8,198	4,500
Total operating expenses .....	200,776	146,408	104,693
(Loss) income from operations .....	(146,700)	280,392	273,302
Other income (expense):			
Interest income .....	164	468	603
Interest expense .....	(8,556)	(12,980)	(2,923)
Other, net .....	(950)	2,058	(384)
(Loss) income before taxes .....	(156,042)	269,938	270,598
(Benefit) provision for income taxes .....	(13,734)	86,541	95,843
Net (loss) income .....	<u>\$(142,308)</u>	<u>\$183,397</u>	<u>\$174,755</u>
Net (loss) income per share:			
Basic .....	\$ (1.20)	\$ 1.48	\$ 1.26
Diluted .....	\$ (1.20)	\$ 1.45	\$ 1.24
Weighted-average number of shares used in per share calculations:			
Basic .....	118,776	123,924	138,673
Diluted .....	118,776	126,051	140,902

The accompanying notes are an integral part of these consolidated financial statements.

**GT Advanced Technologies Inc.**  
**Consolidated Statements of Comprehensive (Loss) Income**  
(In thousands, except per share data)

	Nine-Month Period Ended	Fiscal Years Ended	
	December 31, 2012	March 31, 2012	April 2, 2011
Net (loss) income .....	<u>\$(142,308)</u>	<u>\$183,397</u>	<u>\$174,755</u>
Other comprehensive income (loss), net of tax:			
Change in fair value of cash flow hedging instruments, net of tax effect of \$(563), \$(1,429) and \$(1,234), respectively .....	842	2,144	1,742
Foreign currency translation adjustments .....	<u>151</u>	<u>521</u>	<u>551</u>
Other comprehensive income .....	<u>\$ 993</u>	<u>\$ 2,665</u>	<u>\$ 2,293</u>
Comprehensive (loss) income .....	<u><u>\$(141,315)</u></u>	<u><u>\$186,062</u></u>	<u><u>\$177,048</u></u>

**GT Advanced Technologies Inc.**  
**Consolidated Statements of Changes in Stockholders' Equity**  
(In thousands, except per share data)

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
<b>Balance at April 3, 2010</b>	143,815	\$1,438	\$ 86,644	\$ 96,049	\$(5,145)	\$ 178,986
Share-based compensation			8,200			8,200
Option exercises and vesting of restricted stock units	3,097	31	9,200			9,231
Excess tax benefits from share-based award activity			2,546			2,546
Minimum tax withholdings payments for employee share-based awards	(174)	(1)	(1,532)			(1,533)
Net income				174,755		174,755
Other comprehensive income					2,293	2,293
Common stock issued for Crystal Systems acquisition	5,445	54	30,884			30,938
Repurchase of common stock	(26,500)	(265)	(12,604)	(190,607)		(203,476)
<b>Balance at April 2, 2011</b>	<u>125,683</u>	<u>1,257</u>	<u>123,338</u>	<u>80,197</u>	<u>(2,852)</u>	<u>201,940</u>
Share-based compensation			14,592			14,592
Option exercises and vesting of restricted stock units	2,387	23	6,887			6,910
Excess tax benefits from share-based award activity			3,475			3,475
Minimum tax withholdings payments for employee share-based awards	(301)	(3)	(3,079)			(3,082)
Repurchase of common stock	(9,438)	(94)	(13,650)	(64,599)		(78,343)
Net income				183,397		183,397
Other comprehensive income					2,665	2,665
<b>Balance at March 31, 2012</b>	<u>118,331</u>	<u>1,183</u>	<u>131,563</u>	<u>198,995</u>	<u>(187)</u>	<u>331,554</u>
Net loss				(142,308)		(142,308)
Other comprehensive income					993	993
Option exercises and vesting of restricted stock units	1,309	13	395			408
Share-based compensation			10,969			10,969
Excess tax deficiency from share-based award activity			(1,709)			(1,709)
Minimum tax withholding payments for employee share-based awards	(347)	(3)	(1,535)			(1,538)
Equity component of convertible debt, net of tax and issuance costs			60,182			60,182
Purchase of bond hedges			(57,923)			(57,923)
Proceeds from warrant transaction			41,623			41,623
<b>Balance at December 31, 2012</b>	<u>119,293</u>	<u>\$1,193</u>	<u>\$183,565</u>	<u>\$ 56,687</u>	<u>\$ 806</u>	<u>\$ 242,251</u>

The accompanying notes are an integral part of these consolidated financial statements.

**GT Advanced Technologies Inc.**  
**Consolidated Statements of Cash Flows**  
(In thousands)

	Nine-Month Period Ended December 31, 2012	Fiscal Years Ended	
		March 31, 2012	April 2, 2011
<b>Cash flows from operating activities:</b>			
Net (loss) income	\$(142,308)	\$ 183,397	174,755
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Amortization expense	7,619	8,198	4,500
Depreciation expense	15,100	9,650	5,167
Convertible notes discount amortization	2,556	—	—
Contingent consideration expense	(12,883)	2,271	1,834
Impairment of goodwill	57,037	—	—
Asset impairments	30,279	—	—
Deferred income tax expense	(49,297)	8,486	36,090
Write-down of inventories	68,635	10,447	2,081
Write-down of vendor advances	8,352	—	—
Share-based compensation expense	11,005	14,727	8,224
Excess tax benefits from share-based awards	(117)	(3,651)	(2,541)
Amortization of deferred financing costs	1,066	9,594	1,087
Other adjustments, net	4,786	(1,138)	220
Changes in operating assets and liabilities (excluding impact of acquired assets and assumed liabilities):			
Accounts receivable	41,468	20,206	(32,976)
Inventories	(43,122)	(75,778)	(57,787)
Deferred costs	46,360	154,073	(56,855)
Vendor advances	27,357	(68,561)	(2,472)
Prepaid expenses and other assets	385	5,496	(12,404)
Accounts payable and accrued expenses	13,471	(45,396)	60,474
Customer deposits	(150,982)	187,641	23,809
Deferred revenue	(74,214)	(249,357)	111,170
Income taxes	(14,903)	23,020	5,949
Refundable income taxes	—	20,264	(20,264)
Other, net	872	4,084	1,713
<i>Net cash (used in) provided by operating activities</i>	<u>(151,478)</u>	<u>217,673</u>	<u>251,774</u>
<b>Cash flows from investing activities:</b>			
Purchases and maturities of short-term investments	—	—	20,000
Purchases and deposits on property, plant and equipment	(25,167)	(48,152)	(31,263)
Proceeds from sale of property, plant and equipment	163	—	—
Other investing activities	—	597	—
Acquisitions, net of acquired cash	(10,172)	(60,428)	(22,770)
<i>Net cash used in investing activities</i>	<u>(35,176)</u>	<u>(107,983)</u>	<u>(34,033)</u>
<b>Cash flows from financing activities:</b>			
Borrowings under credit facility	70,000	75,000	125,000
Principal payments under credit facility	(5,438)	(120,313)	(4,687)
Proceeds from issuance of convertible notes	220,000	—	—
Cash paid for bond hedges	(57,923)	—	—
Proceeds from issuance of warrants	41,623	—	—
Proceeds and related excess tax benefits from exercise of share-based awards	526	10,561	11,777
Payments of contingent consideration from business combinations	(4,475)	(4,884)	(3,107)
Payments related to share repurchases to satisfy statutory minimum tax withholdings	(1,538)	(3,082)	(1,533)
Repurchase of common stock	—	(75,000)	(203,476)
Deferred financing costs	(8,579)	(3,553)	(9,922)
Other financing activities	(418)	(372)	—
<i>Net cash provided by (used in) financing activities</i>	<u>253,778</u>	<u>(121,643)</u>	<u>(85,948)</u>
Effect of foreign exchange rates on cash	68	107	208
<i>Increase (decrease) in cash and cash equivalents</i>	<u>67,192</u>	<u>(11,846)</u>	<u>132,001</u>
Cash and cash equivalents at beginning of period	350,903	362,749	230,748
Cash and cash equivalents at end of period	<u>418,095</u>	<u>350,903</u>	<u>362,749</u>
<b>Supplemental cash flow information:</b>			
Cash paid for interest	\$ 2,933	\$ 3,418	\$ 1,548
Cash paid for income taxes, net of refunds	\$ 49,860	\$ 34,176	\$ 75,332
<b>Non-cash investing and financing activities:</b>			
(Decrease) increase in accounts payable and accrued expenses for property, plant and equipment	\$ (10,020)	\$ 8,421	\$ 1,738
Contingent consideration from acquisitions	\$ 5,200	\$ 13,858	\$ 12,500
Property, plant and equipment acquired under capital lease	\$ —	\$ 1,021	\$ —

See accompanying notes to these consolidated financial statements.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements**  
**(In thousands, except per share data)**

**1. Organization**

GT Advanced Technologies Inc. (the “Company”), is a diversified technology company with innovative crystal growth equipment and solutions for the global solar, LED and electronics industries. Our products are designed to accelerate the adoption of advanced materials that improve performance and lower the cost of manufacturing. References herein to “we,” “us,” “our” and “Company” are to GT Advanced Technologies Inc., operating through its subsidiaries.

Our principal products are:

- Silicon Deposition Reactors (SDR™) and related equipment used to produce polysilicon, the key raw material used in silicon-based solar wafers and cells;
- Sapphire crystallization furnaces (ASF®) which are used to crystallize sapphire boules. These sapphire boules are used to make sapphire wafers, a substrate for manufacturing light emitting diodes (LEDs), as well as sapphire blanks and windows for such applications as medical devices and watch crystals; and
- Directional solidification (DSS™) furnaces and related equipment used to cast multicrystalline and MonoCast™ crystalline silicon ingots. These ingots are used to make photovoltaic (PV) solar wafers and cells.

The Company also produces sapphire material at its pilot production facility in Massachusetts which is sold directly to customers and used to make a variety of products such as epitaxial-ready wafers for use in the LED and other specialty markets.

The Company is headquartered in Nashua, New Hampshire and sells its products worldwide. The Company also has locations in Merrimack, New Hampshire; Danvers, Massachusetts; Salem, Massachusetts; Missoula, Montana; Hazelwood, Missouri; Shanghai and Beijing, China; Hong Kong; and Chupei City, Taiwan. The Company operates through three business segments: the photovoltaic, or PV segment, the polysilicon segment and the sapphire segment.

*Recent Developments*

During the three-month period ended December 31, 2012, the polysilicon, photovoltaic (“PV”) and sapphire (including LED) industries continued to face significant challenges, including, among others, (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by the Company; (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of the Company’s customers in China (where a majority of the Company’s customers are located) and continues to create uncertainty among the Company’s customers and the industries the Company serves; (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries, due in part to changes in the global capital markets which have resulted in a more stringent lending environment which in turn has caused decreased spending within the industries the Company serves, as customers try to preserve their liquidity; (iv) deterioration of the financial health of the Company’s customers and (v) structural changes in the PV industry which, the Company believes, will require that any recovery in the PV market will be driven by changes in technology and that demand for existing multicrystalline products (DSS) will be very limited.

Taking these factors into account, during December 2012, the Company took a number of strategic actions, including, (i) intending to discontinue any significant future investments in the DSS product

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**1. Organization (Continued)**

line and (ii) determining that the vast majority of the amounts in the Company's backlog attributable to DSS equipment is at risk of not converting into revenue and, accordingly, future sales of DSS will be limited. The Company has taken or plans to take a number of strategic actions, including shifting focus from acquiring other companies and technology to engaging in joint development and licensing arrangements; and idling the Company's HiCz Hazelwood facility in St. Louis and shifting that research and development to Merrimack, New Hampshire. These factors triggered impairment assessments that resulted in impairment charges in December 2012 of \$60,192 related to PV inventory, \$8,352 related to all remaining PV vendor advances, \$57,037 related to PV goodwill, and \$29,261 related to certain long-lived, intangible and other assets located at our HiCz Hazelwood facility. Refer to Notes 4, *Goodwill and Intangible Assets*, 6, *Inventories*, and 11, *Restructuring Charges and Asset Impairments*, for further details.

For the nine-month period ended December 31, 2012, the Company incurred a loss from operations of \$146.7 million, a net loss of \$142.3 million, and used \$151.5 million in cash for operating activities. The Company expects the factors outlined in the preceding paragraphs to continue through calendar year 2013. As a result, much of the Company's revenue for calendar year 2013 is expected to result from filling orders in backlog and the Company does not expect any meaningful revenue from new contracts entered into during 2013. As a result of the forgoing conditions, the Company anticipated that it may not be able to maintain compliance with the certain financial covenants as of March 31, 2013 (or for the remainder of 2013).

On February 27, 2013, the Company, Bank of America N.A. and certain lenders agreed to amend certain provisions of the 2012 Credit Agreement, the relevant terms of which are described in Note 10, Long Term Debt and Revolving Credit Facility (the "2013 Amendment"). The 2013 Amendment waives the application of the leverage and interest coverage ratios through June 2014 (the "waiver period") and requires the Company to comply with new financial covenants during the waiver period to maintain at all times minimum levels of liquidity, as defined, and quarterly cumulative minimum amounts of Consolidated Adjusted Earnings Before Interest, Tax, Depreciation and Amortization as defined in the 2013 Amendment.

Based on the Company's forecasts, the Company expects to be in compliance with the revised financial covenants. In the event that the Company is unable to achieve its operating forecasts, the Company could be required to pay all outstanding amounts due under the Credit Agreement. Management believes that the Company has sufficient cash resources to fund operations for at least the next twelve months including repayment of amounts outstanding under the Credit Agreement, if necessary.

**2. Significant Accounting Policies**

The accompanying consolidated financial statements reflect the application of certain significant accounting policies, as described in this note and elsewhere in these notes.

**Fiscal Year End.** On April 16, 2012, the board of directors of the Company voted to amend the Company's amended and restated by-laws to provide that the Company's fiscal year will end on December 31 of each year. Prior to this amendment, the Company's by-laws had provided that fiscal years ended on the Saturday closest to March 31st of each year. As a result of this change to the fiscal year end, the Company reports a nine-month transition period consisting of the period from April 1,



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

2012 to December 31, 2012, and the 2013 fiscal year will begin on January 1, 2013 and end on December 31, 2013. The unaudited comparative information for the nine-month period ended December 31, 2011 is included in Note 23, *Transition Period Comparative Financial Data*. The fiscal years ended March 31, 2012 and April 2, 2011 reflect the twelve-month results of the respective fiscal years.

The Company will report interim quarters, other than fourth quarters which will always end on December 31, on a 13-week basis ending on the last Saturday within such period. The interim quarter ends are determined at the beginning of each year based on the 13-week quarters. The 2013 interim quarter ends will be March 30, June 29 and September 28. The interim quarter ends for the nine-month period ended December 31, 2012 were June 30 and September 29.

**Principles of Consolidation.** The accompanying consolidated financial statements include the accounts of the Company and all of its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

**Foreign Currency Translation.** For foreign subsidiaries where the functional currency is the local currency, assets and liabilities are translated into U.S. dollars at the current exchange rate on the balance sheet date. Revenue and expenses are translated at average rates of exchange prevailing during each period. Translation adjustments for these subsidiaries are included in accumulated other comprehensive loss.

For foreign subsidiaries where the functional currency is the U.S. dollar, monetary assets and liabilities are translated into U.S. dollars at the current exchange rate on the balance sheet date. Nonmonetary assets and liabilities are remeasured into U.S. dollars at historical exchange rates. Revenue and expense items are translated at average rates of exchange prevailing during each period.

Realized and unrealized foreign currency gains and losses arising from transactions denominated in currencies other than the subsidiary's functional currency are reflected in earnings.

For the nine-month period ended December 31, 2012, and the fiscal years ended March 31, 2012, and April 2, 2011, net foreign currency transaction losses of \$1,194, \$1,866 and \$85, respectively, are included in other, net, in the consolidated statements of operations.

**Use of Estimates.** The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. Management evaluates estimates on an ongoing basis, including those related to revenue recognition, allowance for doubtful accounts, inventory valuation, deferred tax assets and liabilities, property and equipment, goodwill and other intangible assets, warranty obligations, contingent consideration, other contingencies and share-based compensation. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the then current circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. The intent is to accurately state assets and liabilities given facts known at the time. These assumptions may prove incorrect as facts change in the future. Actual results may differ materially from these estimates under different assumptions or conditions.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

**Cash Equivalents.** The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

**Accounts Receivable and Allowance for Doubtful Accounts.** The Company carries its accounts receivable at their face amounts less an allowance for doubtful accounts. On a periodic basis, the Company evaluates its accounts receivable and establishes the allowance for doubtful accounts based on a combination of specific customer circumstances, credit conditions and a history of write-offs and collections. Where the Company is aware of a customer's inability to meet its financial obligations, it specifically reserves for the potential bad debt to reduce the net recognized receivable to the amount it reasonably believes will be collected. The Company's policy is generally not to charge interest on trade receivables after the invoice becomes past due. A receivable is considered past due if payments have not been received within agreed-upon invoice terms. Accounts are reviewed regularly for collectability and those deemed uncollectible are written off. The allowance for doubtful accounts was \$3,103 and \$5,422 as of December 31, 2012 and March 31, 2012, respectively.

**Fair Value of Financial Instruments.** The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. The carrying values of cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities and long-term debt approximate their respective fair values due to their short-term maturities or market interest rates. Foreign currency derivatives are carried at fair value based on quoted market prices for financial instruments with similar characteristics.

**Concentration of Credit Risk.** Financial instruments that potentially subject the Company to significant concentration of credit risk would include its money market fund investments (categorized as cash and cash equivalents). The Company's policy is to invest only with high quality issuers and has policies limiting, among other things, the amount of credit exposure to any one issuer. As of December 31, 2012, the Company held all of its cash and cash equivalents in deposit accounts with its financial institutions.

In addition, the Company has credit risk from derivative financial instruments used in hedging activities and accounts receivable. The Company invests in a variety of financial instruments and limits the amount of financial exposure to any one financial institution. The Company has a comprehensive credit policy in place and exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. Credit risk is mitigated through collateral such as letter of credit, bank guarantees or payment terms like cash in advance. The credit risk from derivative financial instrument is described further below under the following caption—  
*Derivative Financial Instruments and Hedging Instruments.*

**Inventories.** Inventories are stated at the lower of cost or market. The cost of inventory is determined using the first-in, first-out (FIFO) method. The Company records excess and obsolete inventory charges for both inventories on site as well as inventory at contract manufacturers and suppliers when the carrying amount exceeds the net realizable value.

The Company performs periodic reviews of inventory items to identify excess inventories on hand by comparing on-hand balances to anticipated usage using recent historical activity as well as anticipated or forecasted demand. If estimates of customer demand diminish further or market

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

conditions become less favorable than those projected by the Company, additional inventory write-downs may be required.

The Company classifies inventory that is expected to be on hand beyond one year or one operating cycle as non-current inventory and is included in other assets on the consolidated balance sheets.

***Purchase Commitments and Vendor Advances.*** The Company enters into commitments to purchase material from various suppliers in the ordinary course of business. These commitments are entered into to satisfy the material requirements of a specific contract or the overall production plan and often require the Company to make payments in advance. The Company evaluates these advances for recoverability on a periodic basis and more frequently if indicators of asset impairment arise.

In the event the Company reschedules and/or cancels a portion of these commitments due to customer delivery delays, customer contract terminations or changes to its production plans, the Company may be liable for cancellation penalties or be required to purchase material in excess of its current expected demand. In such instances, the Company reviews the contractual terms of its purchase commitments and may seek to negotiate with the vendor to minimize any potential loss. In cases where the cancellation is the result of a customer contract termination or delay in customer delivery, the Company may seek to recover the costs incurred. For additional information refer to Note 14, *Commitments and Contingencies*.

The Company accrues as cost of revenue losses estimated on advances which are not considered recoverable because of a deterioration in the financial condition of the vendor or because the advances are expected to be forfeited as part of a planned order termination and any termination fees which may be paid to vendors when the Company terminates the contract in accordance with the contract terms. The Company impaired \$8,352 related to all remaining PV vendor advances at December 31, 2012. For additional information refer to Note 6, *Inventories*.

***Property, Plant and Equipment.*** Land, land improvements, leasehold improvements, buildings, manufacturing equipment and computer equipment are stated at cost. Depreciation is provided, primarily using the straight-line method, over estimated useful lives, ranging from 3 to 15 years for manufacturing equipment and furniture and fixtures, and up to 40 years for buildings. Leasehold improvements are capitalized and depreciated over the lesser of the useful life or the initial lease term. The Company capitalizes certain computer software and software development costs incurred in connection with developing our computer software for internal use. Capitalized software costs are included in property, plant and equipment, net, on the Company's consolidated balance sheet and depreciated on a straight-line basis over the estimated useful lives of the software. Expenditures for repairs and maintenance are charged to expenses as incurred.

***Intangibles and other Long-Lived Assets.*** The Company periodically assesses its intangible and other long-lived assets for impairment whenever events or changes in circumstances suggest that the carrying value of an asset may not be recoverable. A long-lived asset or asset group that is held for use is required to be grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. These lowest levels of cash flows are used in the calculation of whether or not the carrying amount of the long-lived asset is recoverable. The Company recognizes an impairment loss for intangibles and other long-lived assets if the carrying amount of a long-lived asset is not recoverable based on its undiscounted future cash

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

flows. Any such impairment loss is measured as the difference between the carrying amount and the fair value of the asset.

**IPR&D.** In-process research and development (“IPR&D”) assets are considered indefinite-lived intangible assets until completion or abandonment of the associated research and development efforts. IPR&D represents the fair value assigned to incomplete technologies that the Company acquires, which at the time of acquisition have not reached technological feasibility and have no alternative future use. A technology is considered to have an alternative future use if it is probable that the acquirer will use the asset in its incomplete state as it exists at the acquisition date, in another research and development project that has not yet commenced, and economic benefit is anticipated from that use. Substantial additional research and development may be required before any of the Company’s IPR&D programs may reach technological feasibility. Upon completion of the projects, the IPR&D assets will be amortized over their estimated useful lives.

The Company tests its indefinite-lived IPR&D assets for impairment on an annual basis, or more frequently if an impairment indicator is present, by comparing the fair value of each IPR&D asset to the carrying value for the asset. If the carrying value is greater than the fair value of the asset, the Company is required to write down the value of the IPR&D asset to its fair value. The Company will test its indefinite-lived IPR&D assets for potential impairment until the projects are completed or abandoned.

**Goodwill.** Goodwill represents the excess of the cost of acquired businesses over the fair value of identifiable net assets acquired. Goodwill is tested for impairment on an annual basis, as well as on an interim basis, as warranted, whenever events and changes in circumstances indicate there may be an impairment. Goodwill is evaluated at the reporting unit level and is attributable to the Company’s PV and Sapphire reporting units. To test for impairment, the Company compares the carrying value of the reporting unit to its fair value. If the reporting unit’s carrying value exceeds its fair value, the Company would record an impairment loss to the extent that the carrying value of goodwill exceeds its implied fair value.

As a result of the change in the Company’s fiscal year end from the Saturday closest to March 31 to December 31, the Company will report a nine-month transition period consisting of the period from April 1, 2012 to December 31, 2012. Effective in the quarter ended December 31, 2012, the Company elected to change its annual goodwill impairment testing date from the day following the Saturday closest to December 31 to the day following the Saturday closest to September 30, in order to maintain the Company’s existing accounting practice to assess goodwill for impairment as of the first day of the last quarter of the fiscal year. The Company believes this change in accounting principle is preferable because it aligns the timing of the annual goodwill impairment test with the Company’s revised planning and budgeting process, which will allow the Company to utilize the updated business forecasts in the discounted cash flow analyses used in the estimate of fair value of the Company’s reporting units. This change did not accelerate, delay, avoid or cause a goodwill impairment charge. As it is impracticable to objectively determine the estimates and assumptions necessary to perform the annual goodwill impairment test without the use of hindsight as of each annual impairment testing date for periods prior to September 30, 2012, the Company has prospectively applied the change in the annual goodwill impairment testing date from September 30, 2012. During 2012, the Company tested its goodwill for impairment as of January 1, 2012 (former annual impairment testing date) and

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

September 30, 2012 (current annual impairment testing date), and concluded there was no impairment of the carrying value of goodwill as of either date. In light of challenges in the solar and sapphire markets, during the three months ended December 31, 2012, including, (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by the Company, (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of the Company's customers, (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries, (iv) the deterioration of our customers financial condition and (v) the Company's sustained decline in its stock price and a significant decline in the Company's financial outlook for the next few years, the Company determined that sufficient impairment indicators existed to require performance of an interim goodwill impairment analysis as of December 31, 2012.

**Warranty.** The Company's polysilicon products are generally sold with a standard warranty typically for a period not exceeding twenty-four months from delivery. The Company's PV and sapphire equipment are generally sold with a standard warranty for a period equal to the shorter of: (i) twelve months from the date of acceptance by the customer; or (ii) fifteen months from the date of shipment. The warranty is typically provided on a repair or replacement basis and is not limited to products or parts manufactured by the Company. The Company's sapphire material products and HiCz(tm) material products are generally sold with a standard warranty for a period not greater than thirty days, but may be for longer periods in certain circumstances. The Company accrues an estimate of the future costs of meeting warranty obligations when products are shipped. The Company makes and revises this estimate based on the number of units under warranty and historical experience with warranty claims.

**Derivative Financial Instruments and Hedging Agreements.** The Company enters into forward foreign currency exchange contracts to hedge cash flow exposures from the impact of changes in foreign exchange rates. Such exposures result primarily from purchase orders for inventory and equipment that are denominated in currencies other than the U.S. dollar, primarily the Euro. These foreign forward currency exchange contracts are entered into to support purchases made in the normal course of business and are not speculative in nature. The Company does not enter into any hedging arrangements for speculative purposes. The Company's hedges relate to anticipated transactions, are designated and documented at the inception of the respective hedges as cash flow hedges and are evaluated for effectiveness quarterly.

The Company records all derivative financial instruments at fair value in the consolidated financial statements in either other current assets or accrued liabilities, at fair value. Changes in the fair value of the derivative financial instruments are either recognized periodically in earnings or in stockholders' equity as a component of accumulated other comprehensive income ("AOCI") or loss depending on whether the derivative financial instrument qualifies for hedge accounting. The effective portion of any changes in the fair value of forward contracts that have been designated and qualify as cash flow hedges is recorded in AOCI until the hedged transaction occurs or the recognized currency transaction affects earnings. Once the hedged transaction occurs or the recognized currency transaction affects earnings, the effective portion of any related gains or losses on the cash flow hedge is reclassified from AOCI to earnings. Changes in fair values of derivatives not qualifying for hedge accounting are reported in earnings as they occur. The Company classifies the cash flows from hedging transactions in the same categories as the cash flows from the respective hedged items.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

Hedge accounting is discontinued when it is determined that a derivative instrument is no longer an effective hedge. Any gains or losses that were in AOCI from hedging a forecasted transaction no longer considered probable of occurring are recognized immediately in current period earnings due to changes in expectations on the original forecasted transaction.

Derivative financial instruments involve, to a varying degree, elements of market and credit risk not recognized in consolidated financial statements. The market risk associated with these instruments resulting from currency exchange rate or interest rate movements is expected to offset the market risk of the underlying transactions, assets and liabilities being hedged. The counterparties to the agreements relating to the Company's foreign exchange instruments are major international financial institutions with high credit ratings. The Company does not believe that there is significant risk of nonperformance by the counterparties because the Company monitors the credit rating of such counterparties. While the contract or notional amounts of derivative financial instruments provide one measure of the volume of these transactions, they do not represent the amount of the Company's exposure to credit risk. The amounts potentially subject to credit risk (arising from the possible inability of the counterparty to meet the terms of the contracts) are generally limited to the amounts, if any, by which the counterparty's obligations under the contracts exceed the obligations of the Company to the counterparty.

**Convertible Senior Notes.** The Company separately accounts for the liability and equity components of its \$220,000 aggregate principal of 3.00% convertible senior notes due 2017 issued on September 28, 2012 (the "Notes"). The estimated fair value of the liability component is computed based on an assessment of the fair value of a similar debt instrument that does not include a conversion feature. The equity component, which is recognized as a debt discount and recorded in additional paid-in capital, represents the difference between the gross proceeds from the issuance of the notes and the estimated fair value of the liability component at the date of issuance. The debt discount is amortized over the expected life of a similar debt instrument without the equity component. The effective interest rate used to amortize the debt discount is based on our estimated non-convertible borrowing rate as of the date the notes were issued.

**Income Taxes.** The Company provides for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company records deferred tax assets to the extent it believes these assets will more-likely-than-not be realized. All available positive and negative evidence is reviewed in making a determination. The evidence includes future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial operations. The realization of the deferred income tax assets ultimately depends on the existence of sufficient taxable income in either the carryback or carryforward periods under tax law. If future events differ from the Company's current forecasts, a valuation allowance may need to be established.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

The Company assesses its income tax positions and records tax benefits based upon management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, the Company records the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. The Company classifies liabilities for uncertain tax positions as non-current liabilities unless the uncertainty is expected to be resolved within one year. The Company classifies charges for interest and penalties on uncertain tax positions as income tax expense.

The Company classifies tax benefits realized upon the exercise of stock options in excess of that which is associated with the expense recognized for financial reporting purposes, along with any deficiencies to the extent of prior period gains, within additional paid-in capital. The excess tax benefits realized from stock compensation deductions are presented as a financing cash inflow rather than as a reduction of income taxes paid in the consolidated statement of cash flows.

**Share-Based Compensation.** The Company grants stock options, restricted stock and restricted stock units at the discretion of the Board of Directors, a committee thereof, or the Chief Executive Officer (pursuant to authority granted by the Company's Board of Directors) to certain employees, consultants and members of the Board of Directors. The Company's stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally represents the vesting period, and includes an estimate of the awards that will be forfeited. The Company uses the Black-Scholes valuation model for estimating the fair value on the date of grant of stock options. The fair value of stock option awards is affected by the Company's stock price as well as valuation assumptions, including the volatility of the Company's stock price, expected term of the option, risk-free interest rate and expected dividends.

**Customer Deposits and Payment Terms.** The Company's payment terms with customers typically include a deposit which is recorded as customer deposits until such time as the products are shipped. The Company sometimes is requested by its customers to issue letters of credit, in order to secure customer deposits. Generally, such a letter of credit expires upon shipment to the customer. In addition to cash deposits, customers are also generally required to post a letter of credit at least equal to 90% of the value of the equipment prior to shipment. Upon shipment, the Company will invoice all but a final portion (typically 10%) for each product shipped with the remainder due upon customer acceptance. The Company's contracts with customers do not provide for any refunds for services or products and therefore no specific reserve for such is maintained. The Company classifies customer deposits that are expected to be on hand beyond one year, or one operating cycle, as non-current in the consolidated balance sheets.

At December 31, 2012 and March 31, 2012, the Company had \$33,540 and \$126,478, respectively, of standby letters of credit outstanding representing primarily performance guarantees issued against customer deposits. These standby letters of credit have not been included in the consolidated financial statements and have been issued under the Company's Revolving Credit Facility.

**Revenue Recognition.** The majority of the Company's contracts involve the sale of equipment and services under multiple element arrangements. The Company recognizes revenue when persuasive

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

evidence of an arrangement exists, the sale price is fixed or determinable, collectability is reasonably assured through historical collection results and regular credit evaluations, and delivery has occurred and there are no uncertainties regarding customer acceptance.

On April 3, 2011, the Company prospectively adopted the provisions of *Accounting Standards Update ("ASU") 2009-13, Revenue Recognition (Topic 605)—Multiple-Deliverable Revenue Arrangements ("ASU 2009-13")* for new and materially modified arrangements originating on or after April 3, 2011. The adoption of *ASU 2009-13* did not have a material impact on the Company's financial results for the fiscal year ended March 31, 2012.

*ASU 2009-13* amended the accounting standards for multiple-deliverable revenue arrangements to require an entity to allocate revenue in an arrangement on the basis of the relative selling price of deliverables at the inception of the arrangement. When applying the relative selling price method, the selling price for each deliverable is determined using vendor-specific objective evidence of selling price ("VSOE"), if it exists, or third-party evidence of selling price ("TPE"). If neither VSOE nor TPE exists, then the Company uses its best estimate of the selling price ("ESP") for that deliverable. The use of the residual method was eliminated by *ASU 2009-13*.

The multiple-deliverable revenue guidance requires that the Company evaluate each deliverable in an arrangement to determine whether such deliverable would represent a separate unit of accounting. The product or service constitute a separate unit of accounting when it fulfills the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis and (b) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the Company. The Company's sales arrangements do not include a general right of return and the majority of the Company's products and services qualify as separate units of accounting.

Prior to the adoption of *ASU 2009-13*, the Company's products or services constitute separate units of accounting when it fulfilled the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis, (b) there is objective and reliable evidence of the fair value of the undelivered item(s), and (c) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the Company. Given the differences created in the pre *ASU 2009-13* accounting model in comparison to the *ASU 2009-13* accounting model, for transactions entered into prior to the adoption of *ASU 2009-13*, where objective evidence of fair value exists for all undelivered elements, but not delivered elements, the Company applies the residual method for recognizing revenue. If objective evidence of fair value does not exist for the undelivered elements of the arrangement, all revenue is deferred until such evidence does exist, or until all elements for which the Company does not have objective evidence of fair value are delivered, whichever is earlier assuming all other revenue recognition criteria are met. In certain arrangements, the Company provided customers with contractual rights that extend for a specific period of time. The Company considered these rights a separate element, for which objective evidence of fair value did not exist. Revenue for these arrangements is being recognized ratably over the period commencing when all other elements had been delivered through the period when such rights expire.



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

The Company has and continues to establish VSOE based upon the price charged when the same element is sold separately or established by management having the relevant pricing authority. When VSOE exists, it is used to determine the selling price of a deliverable. Objective evidence of fair value for installation and training services is based upon the estimated time to complete the installation and training at the established hourly rates that the Company charges for similar professional services on a stand-alone basis. The Company has not been able to establish VSOE for certain of its products and for certain of its services because the Company has not sold such products or services on a stand-alone basis.

When VSOE is not established, the Company attempts to establish the selling price of each element based on TPE. The Company's products and services differ from that of its competitors and therefore, comparable pricing of competitors' products and services with similar functionality generally cannot be obtained. Accordingly, the Company is generally not able to determine TPE for its products or services.

For transactions entered into subsequent to the adoption of *ASU 2009-13*, when the Company is unable to establish selling price using VSOE or TPE, the Company uses ESP in its allocation of arrangement consideration for the relevant deliverables. The objective of ESP is to determine the price at which the Company would transact a sale if a product or service was sold on a stand-alone basis. The Company determines ESP for its products and certain services by considering multiple factors including, but not limited to, overall market conditions, profit objectives and historical pricing practices for such deliverables.

The Company's ASF and DSS equipment contracts contain customer-specified acceptance provisions. Polysilicon reactors contracts do not contain customer-specified acceptance provisions, and are generally deemed to be contractually accepted at the time the reactor is initially delivered to the customer's facility. For arrangements containing products that the Company considers to be "established," revenue is recognized for the product deliverable upon delivery, assuming all other revenue recognition criteria are met. For arrangements containing products considered to be "new" or containing customer acceptance provisions that are deemed to be more than perfunctory, product revenue is recorded upon customer acceptance or at the time the product is determined to be "established".

Products are classified as "established" products if post-delivery acceptance provisions and the installation process have been determined to be routine and there is a demonstrated history of achieving the predetermined contractual objective specifications.

In determining when a "new" product is considered "established", the Company considers the following factors: (i) the stability of the product's technology, (ii) the test results of products prior to shipment, (iii) successful installations at customer's sites and (iv) the performance results once installed. The Company generally believes that the satisfaction of the first two criteria, coupled with the satisfaction of final two criteria for multiple product units in the facilities of at least three to five separate customers that, in each case, results in acceptance in accordance with the standard contract terms are necessary to support the conclusion that there are no uncertainties regarding customer acceptances of the standard objective specifications and therefore the installation process can be considered perfunctory.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

The Company's contracts generally do not contain cancellation provisions. When a customer fails to perform its contractual obligations and such failure continues after notice of breach and a cure period the Company may terminate the contract and the customer may be liable for contractual damages. At the time of termination, the Company records as revenues any non-refundable deposits or deferred revenue amounts and records as cost of revenue any previously deferred cost as well as any related costs to terminate the contract including excess or obsolete inventory or unrecoverable vendor advances. During the nine-month period ended December 31, 2012, and the fiscal years ended March 31, 2012 and April 2, 2011 the Company recognized \$8,538, \$35,519 and \$44,352 in revenue as a result of contract terminations, respectively.

Spare parts revenue is generally recognized upon shipment and services revenue is generally recognized as the services are provided.

The Company records reimbursable out-of-pocket expenses and shipping as both revenue and as a direct cost of revenue, as applicable. The Company records revenue net of applicable sales and value added taxes collected. Taxes collected from customers are recorded as part of accrued expenses on the consolidated balance sheet and are remitted to state and local taxing jurisdictions based on the filing requirements of each jurisdiction.

*Deferred Revenue and Deferred Costs.* Deferred revenue includes amounts that have been billed per the contractual terms but have not been recognized as revenue. Deferred costs represent direct costs related to deferred revenues and include the cost of manufactured or acquired inventory items, capitalized labor and related overhead for engineering services, and in certain cases shipping costs. The Company classifies as long-term the portion of deferred revenue and deferred costs that are expected to be recognized beyond one year, or one operating cycle, as non-current on the consolidated balance sheets.

*Research and Development Costs.* Research and development costs are expensed as incurred.

*Business Combinations.* The Company accounts for business combinations at fair value. All changes that do not qualify as measurement period adjustments are included in current period earnings. Significant judgment is required to determine the estimated fair value for assets and liabilities acquired and to assigning their respective useful lives. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including available historical information and valuations that utilize customary valuation procedures and techniques.

The Company generally employs the income method to estimate the fair value of intangible assets, which is based on forecasts of the expected future cash flows attributable to the respective assets. Significant estimates and assumptions inherent in the valuations reflect a consideration of other marketplace participants, and include the amount and timing of future cash flows (including expected growth rates and profitability), the underlying product life cycles, economic barriers to entry, a brand's relative market position and the discount rate applied to the cash flows, among others.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**2. Significant Accounting Policies (Continued)**

If the actual results differ from the estimates and judgments used in these estimates, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, or require acceleration of the amortization expense of finite-lived intangible assets.

The consideration for our acquisitions often include future payments that are contingent upon the occurrence of a particular event. We record a contingent consideration obligation for such contingent consideration payments at fair value on the acquisition date. We estimate the acquisition date fair value of contingent consideration obligations through valuation models that incorporate probability adjusted assumptions related to the achievement of the milestones and the likelihood of making related payments. Each period the Company revalues the contingent consideration obligations associated with the acquisition and records changes in the fair value as contingent consideration expense or income. Increases or decreases in the fair value of the contingent consideration obligations can result from changes in assumed discount periods and rates, changes in the assumed timing and probability with respect to the attainment of certain underlying financial and operational metrics. Significant judgment is employed in determining these assumptions as of the acquisition date and for each subsequent period. Accordingly, future business and economic conditions, as well as changes in any of the assumptions described above, can materially impact the amount of contingent consideration expense or income recorded in any given period.

**Reclassifications.** Certain reclassifications have been made to prior year financial statements to conform to the current year presentation. Specifically, contingent consideration expense of \$(9,492) for the nine-month period ended December 31, 2012 and \$4,458 and \$2,262 for the fiscal years ended March 31, 2012 and April 2, 2011, respectively, were previously included in general and administrative expense, but are now stated separately in the Company's consolidated statements of operations.

**Recent Accounting Pronouncements**

*Recently Adopted Accounting Pronouncements*

In June 2011, the FASB issued ASU No. 2011-05, *Presentation of Comprehensive Income*. This standard eliminates the previous option to report other comprehensive income and its components in the statement of changes in stockholders' equity. The amendment requires that all non-owner changes in stockholders' equity be presented either in a single statement of comprehensive income or in two separate but consecutive statements. The standard is intended to enhance comparability between entities that report under U.S. GAAP and those that report under International Financial Reporting Standards, and to provide a more consistent method of presenting non-owner transactions that affect an entity's equity. The amendments in this update are to be applied retrospectively. The Company adopted this standard in the quarter ended June 30, 2012. The Company has elected to present the statement of comprehensive (loss) income as a consecutive, separate statement.

**3. Acquisitions**

*Acquisition of Certain Assets of Twin Creeks Technologies, Inc.*

On November 8, 2012, the Company acquired certain assets and intellectual property of Twin Creeks Technologies, Inc. ("Twin Creeks"), a privately owned company involved in the development of an ion implanter technology. The assets were purchased from Twin Creeks' lenders in a private sale for

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**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**3. Acquisitions (Continued)**

total consideration with a fair value of \$15,372. The purchase consideration consisted of \$10,172 in cash and a potential additional \$40,000 of contingent consideration. The fair value of the contingent consideration was estimated at \$5,200 at the date of acquisition.

The acquisition of these assets, and the associated in-process research and development, is intended to have broad application in the production of engineered substrates for power semiconductors, uses within the sapphire and LED industries and thin wafers for solar applications. In addition, the Company expects to pursue the development of thin sapphire laminates for use in applications such as cover and touch screen devices.

The transaction has been accounted for as a business combination and is included in the Company's results of operations from November 8, 2012, the date of acquisition. The acquired business did not contribute revenues from the acquisition date to December 31, 2012. The results of the acquired business, and the acquired net assets, including goodwill, are included in the Company's PV and sapphire segments.

As of December 31, 2012, the purchase price (including the estimated contingent consideration) and related allocations for the acquisition are preliminary. The Company is currently in the process of investigating the facts and circumstances existing as of the acquisition date in order to finalize its valuation and the related tax basis. As a result of the preliminary purchase price allocation, the Company recognized approximately \$937 of goodwill, which is primarily due to expected synergies between the Company's experience in equipment development and the in-process research and development which is expected to drive future product development. A summary of the preliminary purchase price allocation for the acquisition of certain assets and assumed liabilities of Twin Creeks is as follows:

*Fair value of consideration transferred:*

Cash .....	\$10,172
Contingent consideration obligations .....	5,200
Total fair value of consideration .....	<u>\$15,372</u>

*Fair value of assets acquired and liabilities assumed:*

Property, plant and equipment .....	\$ 1,529
Other assets .....	23
In-process research and development .....	12,300
Goodwill .....	937
Deferred tax assets .....	1,970
Accounts payable .....	(1,362)
Other current liabilities .....	(25)
Total net assets acquired .....	<u>\$15,372</u>

The purchase consideration includes contingent consideration payable by the Company in the form of a royalty on net sales of hydrogen ion implantation systems, related equipment, parts and accessories and materials made from hydrogen ion implantation systems and of royalties from any sub-licenses

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**3. Acquisitions (Continued)**

granted by the Company of the underlying intellectual property acquired. The royalty payment is subject to the Company's right to set-off up to \$6,000 for infringement claims brought by third-parties related to the intellectual property acquired. The royalty amount payable is capped at the earlier of \$40,000 of royalties or the 15-year term of the license agreement. The Company determined the fair value of the contingent consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the future revenue. The weighted-average undiscounted probable outcome that the Company initially used to value the contingent consideration arrangement was \$27,562. During the three months ended December 31, 2012, the Company recorded contingent consideration expense of \$214 related to the accretion of the liability to its fair value at December 31, 2012.

Intangible assets are composed of the estimated fair value of acquired in-process research and development ("IPR&D") related Hyperion™ ion implanter technology. At the date of acquisition, Hyperion™ ion implanter technology had not reached commercial technological feasibility nor had an alternative future use and is therefore considered to be IPR&D. The estimated fair value was determined using a probability-weighted income approach, which discounts expected future cash flows to present value. The projected cash flows from the Hyperion™ tool were based on certain key assumptions, including estimates of future revenue and expenses and taking into account the stage of development of the technology at the acquisition date, the time and resources needed to complete development. The Company used a discount rate of 28% and cash flows that have been probability-adjusted to reflect the risks of product commercialization. This discount rate used is comparable to the estimated internal rate of return on Twin Creeks operations and represents the rate that market participants would use to value the intangible assets.

The major risks and uncertainties associated with the timely and successful completion of development include the Company's ability to demonstrate technological feasibility of the product and to successfully complete these tasks within budgeted costs. Consequently, the eventual realized value of the acquired IPR&D may vary from its estimated fair value at the date of acquisition.

The Company incurred transaction costs of \$906, which consisted primarily of advisory services and due diligence. These costs have been recorded as general and administrative expense for the nine-month period ended December 31, 2012.

The acquisition of certain select assets of Twin Creeks did not have a material effect on the Company's results of operations for the nine-month period ended December 31, 2012. Pro forma results of operations have not been presented due to the immaterial nature of these amounts.

*Acquisition of Confluence Solar, Inc.*

On August 24, 2011, the Company acquired 100% of the outstanding shares of stock of privately-held Confluence Solar, Inc. ("Confluence Solar") the developer of HiCz™, a continuously-fed Czochralski (HiCz™) growth technology, that enables the production of high efficiency monocrystalline solar ingots. The purchase consideration consisted of \$61,090 in cash and a potential additional \$20,000 of contingent consideration. The fair value of the contingent consideration was estimated at \$13,858 at the date of acquisition. During the fiscal year ended March 31, 2012, the Company recorded a purchase price adjustment resulting in a reduction in the fair value of consideration by \$511.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**3. Acquisitions (Continued)**

The acquisition of Confluence Solar is intended to expand the Company's photovoltaic, or PV, product portfolio and expand its business into more advanced crystal growth technologies that are designed to increase cell efficiencies and enable customers to produce high-performance monocrystalline silicon ingots at lower costs.

The transaction has been accounted for as a business combination and is included in the Company's results of operations from August 24, 2011, the date of acquisition. The acquired business did not contribute material revenues from the acquisition date to March 31, 2012. The results of the acquired business are included in the Company's PV business reporting segment.

The Company recognized \$17,346 of goodwill, which is primarily due to expected synergies between the Company's experience in equipment development and the acquired technology which is expected to drive new product development. The goodwill created by the transaction is nondeductible for tax purposes. A summary of the purchase price allocation for the acquisition of Confluence Solar is as follows:

*Fair value of consideration transferred:*

Cash .....	\$61,090
Contingent consideration obligations .....	13,858
Purchase price adjustment .....	<u>(511)</u>
Total fair value of consideration .....	<u>\$74,437</u>

*Fair value of assets acquired and liabilities assumed:*

Cash .....	\$ 151
Inventories .....	320
Prepaid expenses and other assets .....	1,080
Property, plant and equipment .....	6,616
Intangible assets .....	71,850
Deferred tax assets .....	13,570
Goodwill .....	17,346
Accounts payable .....	(3,627)
Accrued expenses and other non-current liabilities .....	(452)
Customer deposits .....	(2,000)
Capital lease liability .....	(735)
Deferred tax liabilities .....	<u>(29,682)</u>
Total net assets acquired .....	<u>\$74,437</u>

The purchase consideration includes contingent consideration payable by the Company upon the attainment of a financial target, an operational target and technical targets through the period ending June 30, 2013. Specifically, the contingent consideration is based upon the achievement of (i) a certain revenue target during the period from September 1, 2011 through March 31, 2013, (ii) operational target related to the commissioning of a certain number of monocrystalline ingot pullers by August 31, 2012, (iii) demonstration of certain technical processes related to Czochralski growth processes by June 30, 2013 and (iv) achievement of technical acceptance and commercial delivery on volume orders of certain materials by September 30, 2012. The Company determined the fair value of the contingent

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**3. Acquisitions (Continued)**

consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the attainment of the technical and operational targets. The undiscounted probable outcome that the Company initially used to value the contingent consideration arrangement was \$15,000.

During the nine-month period ended December 31, 2012, based on the failure to satisfy certain operational and technical targets by the contractual target dates, the Company determined that the contingent consideration opportunities related to these targets were not achieved and the Company recognized a total decrease in the fair value of contingent consideration of \$8,177 in the condensed consolidated statements of operations. In addition, the Company recorded contingent consideration income of \$1,611 in connection with a change in probabilities of the remaining targets in connection with the acquisition of Confluence Solar. During the nine-month period ended December 31, 2012, the Company recorded contingent consideration income related to this transaction of \$9,792.

The \$71,850 of acquired intangible assets is comprised of technology of \$66,200, customer relationships of \$950 and trademarks of \$4,700, with weighted average amortization periods of 10 years, 3 years and 10 years, respectively.

The acquisition of Confluence Solar did not have a material impact on the Company's results of operations. Pro forma results of operations have not been presented due to the immaterial nature of those amounts.

*Acquisition of Crystal Systems, Inc.*

On July 29, 2010, the Company acquired 100% of the outstanding shares of common stock of Crystal Systems, a crystalline growth technology company that manufactures sapphire materials used in LED applications, and other sapphire components used in other specialty markets ("Crystal Systems"). The acquisition of Crystal Systems provides the Company access to certain technologies and an expanded product portfolio. The purchase consideration consisted of \$24,798 in cash, 5,445 shares of the Company's common stock valued at \$30,938 (on the date of acquisition) and potential additional \$18,650 contingent consideration based on the attainment of certain financial and technical targets through the period ending March 31, 2012. The fair value of the contingent consideration was estimated at \$12,500 at the date of acquisition.

The transaction has been accounted for as a business combination. The acquired business contributed revenues of \$15,305 the fiscal year ended April 2, 2011. The results of the acquired business are included in the Company's sapphire business segment.

The Company recorded approximately \$42,206 of goodwill which is primarily due to the expected future cash flows from undeveloped intangible assets such as future technology and the assembled

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**3. Acquisitions (Continued)**

workforce. The goodwill created by the transaction is nondeductible for tax purposes. A summary of the purchase price allocation for the acquisition of Crystal Systems is as follows:

*Fair value of consideration transferred:*

Cash .....	\$24,798
Common stock .....	30,938
Contingent consideration obligations .....	12,500
Purchase price adjustment .....	<u>(392)</u>
Total fair value of consideration .....	<u>\$67,844</u>

*Fair value of assets acquired and liabilities assumed:*

Cash .....	\$ 2,028
Accounts receivable .....	1,405
Inventories .....	2,841
Prepaid expenses and other assets .....	589
Property, plant and equipment .....	7,467
Intangible assets .....	24,000
Deferred tax assets .....	726
Goodwill .....	42,206
Customer deposits .....	(974)
Accounts payable, accrued expenses and other non-current liabilities .....	(1,530)
Deferred tax liabilities .....	<u>(10,914)</u>
Total net assets acquired .....	<u>\$ 67,844</u>

The purchase consideration included contingent consideration payable by the Company upon the achievement of (i) a revenue target for calendar year 2010, (ii) revenue and gross margin targets for the fiscal year ending March 31, 2012, (iii) a technical target relating to the commissioning of a predetermined number of crystal-growth furnaces, and (iv) the development of an ingot growth process. All four targets have been achieved, and during the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, the Company paid \$7,866, \$7,071 and \$3,534, respectively, to the former shareholders of Crystal Systems in connection with the attainment of these targets.

During the nine-month period ended December 31, 2012, and the fiscal years ended March 31, 2012 and April 2, 2011, the Company recorded contingent consideration expense of \$86, \$3,708 and \$2,262, respectively. The fair value of the Company's contingent consideration obligations was \$7,865 at March 31, 2012. The undiscounted range of probable outcomes that the Company initially used to value the contingent consideration arrangement was between \$16,000 and \$18,650.

The Company incurred transaction costs of \$837 in connection with the acquisition, which consisted primarily of legal and accounting fees. These costs have been recorded as general and administrative expense within the fiscal year ended April 2, 2011.



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**3. Acquisitions (Continued)**

The acquisition of Crystal Systems did not have a material impact on the Company's results of operations. Pro forma results of operations have not been presented due to the immaterial nature of those amounts.

**4. Goodwill and Intangible Assets**

The following table contains the change in the Company's goodwill during the nine month period ended December 31, 2012:

	<u>Photovoltaic Business</u>	<u>Sapphire Business</u>	<u>Total</u>
Balance as of April 1, 2012			
Goodwill .....	\$ 59,946	\$42,206	\$102,152
Accumulated impairment losses .....	—	—	—
	<u>59,946</u>	<u>42,206</u>	<u>102,152</u>
Acquisition of Twin Creeks .....	469	468	937
Impairment of Photovoltaic goodwill .....	<u>(57,037)</u>	<u>—</u>	<u>(57,037)</u>
Balance as of December 31, 2012			
Goodwill .....	60,415	42,674	103,089
Accumulated impairment losses .....	<u>(57,037)</u>	<u>—</u>	<u>(57,037)</u>
	<u>\$ 3,378</u>	<u>\$42,674</u>	<u>\$ 46,052</u>

Goodwill is not amortized, but is reviewed for impairment annually as of the first day of the fourth quarter of each fiscal year and whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. The process of evaluating the potential impairment of goodwill and intangible assets requires significant judgment. The Company regularly monitors current business conditions and other factors including, but not limited to, adverse industry or economic trends, restructuring actions and projections of future results.

The goodwill impairment test involves a two-step process. The first step is a comparison of each reporting unit's fair value to its carrying value. If the reporting unit's fair value exceeds its carrying value, no further procedures are required. However, if a reporting unit's fair value is less than its carrying value, an impairment of goodwill may exist, requiring a second step to measure the amount of impairment loss. In this step, the reporting unit's fair value is allocated to all of the assets and liabilities of the reporting unit, including any unrecognized intangible assets, in an analysis to calculate the implied fair value of goodwill in the same manner as if the reporting unit was being acquired in a business acquisition. If the implied fair value of goodwill is less than the recorded goodwill, an impairment charge is recorded for the difference. The Company's reporting units are the same as the reportable operating segments identified in Note 18, *Segment and Geographical Information*, which are based on the manner in which the Company operates its business and the nature of those operations.

The Company estimates the fair value of each reporting unit using a combination of the income approach and the market approach. The income approach incorporates the use of a discounted cash flow method in which the estimated future cash flows and terminal values for each reporting unit are discounted using an appropriate discount rate. Cash flow projections are based on management's

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**4. Goodwill and Intangible Assets (Continued)**

estimates of economic and market conditions which drive key assumptions of revenue growth rates, operating margins, capital expenditures and working capital requirements. The discount rate is based on the specific risk characteristics of each reporting unit, the weighted average cost of capital and its underlying forecast. The guideline public company method of the market approach estimates fair value by applying performance metric multiples to the reporting unit's prior and expected operating performance. The multiples are derived from comparable publicly traded companies with similar operating and investment characteristics as the reporting unit. If the fair value of the reporting unit derived using the income approach is significantly different from the fair value estimate using the market approach, the Company reevaluates its assumptions used in the two models. The fair values determined by the market approach and income approach, as described above, are weighted to determine the fair value for each reporting unit. The weighted values assigned to each reporting unit are primarily driven by two factors: 1) the number of comparable publicly traded companies used in the market approach, and 2) the similarity of the operating and investment characteristics of the reporting units to the comparable publicly traded companies used in the market approach.

In order to assess the reasonableness of the calculated reporting unit fair values, the Company also compares the sum of the reporting units' fair values to the Company's market capitalization (per share stock price times number of shares outstanding) and calculates an implied control premium (the excess of the sum of the reporting units' fair values over the market capitalization). The Company evaluates the reasonableness of the control premium by comparing it to control premiums of recent comparable transactions. If the implied control premium is not reasonable in light of these recent transactions, the Company will reevaluate its fair value estimates of the reporting units by adjusting the discount rates and/or other assumptions.

The Company conducted its annual goodwill test for each of its reporting units as of September 30, 2012. The results of the first step of the impairment test indicated that goodwill for each reporting unit was not impaired as of September 30, 2012. In light of challenges in the polysilicon, PV and sapphire (including LED) industries during the three months ended December 31, 2012, as further described under "Recent Development" Note 1 above, including, (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by the Company, (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of the Company's customers, (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries, (iv) the deterioration of our customers financial condition and (v) the Company's sustained decline in its stock price and a significant decline in the Company's financial outlook for the next few years, the Company determined that sufficient impairment indicators existed to require performance of an additional interim goodwill impairment analysis as of December 31, 2012.

In performance of the impairment analysis as of December 31, 2012, the Company applied a weighting to both the discounted cash flow method under the income approach (75%) and the guideline public company method under the market approach (25%) to estimate the fair value of the PV, sapphire and polysilicon reporting units. The weighting of the two approaches did not have a material impact on the impairment calculation. The estimates used in the impairment testing were consistent with the forecasts that the Company uses to manage its business, and considered the significant developments that occurred during the three months ended December 31, 2012. Cash flow

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**4. Goodwill and Intangible Assets (Continued)**

projections are based on management's estimates of economic and market conditions which drive key assumptions of revenue growth rates, operating margins, capital expenditures and working capital requirements. The unobservable inputs used in the model include the discount rate based on the specific risk characteristics of each reporting unit, the weighted average cost of capital and its underlying forecast. More specifically, the discount rate is based on studies that have been conducted over the years which investigate the rates of return venture capitalists require on their investments. The discount rate used in the analysis was 27.5% for the PV reporting unit, 24.6% for the sapphire reporting unit and 13.5% for the polysilicon reporting unit.

The PV reporting unit did not pass the first step of the interim goodwill impairment test as of December 31, 2012. As such, the Company allocated the fair value of the Photovoltaic reporting unit to all of its assets and liabilities. Based on the Company's analysis, the implied fair value of goodwill was substantially lower than the carrying value of goodwill for the Photovoltaic reporting unit. As a result, the Company recorded a \$57,037 goodwill impairment charge related to the Photovoltaic reporting unit on December 31, 2012. As of December 31, 2012, the PV reporting unit had \$3,378 of goodwill remaining. The Sapphire reporting units' fair value exceeded its carrying value in the first step of the interim goodwill impairment test as of December 31, 2012 and accordingly there was no impairment of goodwill for this reporting unit.

The evaluation of goodwill for impairment requires the exercise of significant judgment. While the Company believes the assumptions used in the annual and interim impairment tests are reasonable, the analysis is sensitive to adverse changes in the assumptions used in the valuations. In particular, changes in the projected cash flows, the discount rate, the terminal year growth rate and market multiple assumptions could produce significantly different results for the impairment analyses. In the event of future changes in business conditions, the Company will be required to reassess and update its forecasts and estimates used in future impairment analyses. If the results of these analyses are lower than current estimates, a material impairment charge may result at that time.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**4. Goodwill and Intangible Assets (Continued)**

Intangible assets at December 31, 2012 and March 31, 2012 consisted of the following:

	Weighted Average Amortization Period	December 31, 2012			March 31, 2012		
		Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net
<b>Finite-lived intangible assets</b>							
Photovoltaic:							
Customer relationships . . . . .	5.4 years	\$ —	\$ —	\$ —	\$ 5,150	\$ 4,391	\$ 759
Technology . . . . .	9.5 years	72,200	14,951	57,249	72,700	10,486	62,214
Trade names / Trademarks . . .	8.6 years	7,100	3,036	4,064	7,100	2,683	4,417
Supplier relationships . . . . .	5.0 years	—	—	—	1,100	1,100	—
Subtotal: . . . . .		<u>79,300</u>	<u>17,987</u>	<u>61,313</u>	<u>86,050</u>	<u>18,660</u>	<u>67,390</u>
Polysilicon:							
Technology . . . . .	2.6 years	1,500	1,500	—	1,500	1,500	—
Subtotal: . . . . .		<u>1,500</u>	<u>1,500</u>	<u>—</u>	<u>1,500</u>	<u>1,500</u>	<u>—</u>
Sapphire:							
Customer relationships . . . . .	6.0 years	4,100	1,651	2,449	4,100	1,139	2,961
Technology . . . . .	10.0 years	17,300	4,181	13,119	17,300	2,883	14,417
Order backlog . . . . .	1.2 years	500	500	—	500	483	17
Trade names . . . . .	8.0 years	1,100	332	768	1,100	229	871
Non-compete agreements . . . .	5.8 years	1,000	433	567	1,000	299	701
Subtotal: . . . . .		<u>24,000</u>	<u>7,097</u>	<u>16,903</u>	<u>24,000</u>	<u>5,033</u>	<u>18,967</u>
Total finite-lived intangible assets . . . . .		<u>104,800</u>	<u>26,584</u>	<u>78,216</u>	<u>111,550</u>	<u>25,193</u>	<u>86,357</u>
<b>Indefinite-lived intangible assets</b>							
In-process research and development . . . . .		<u>12,300</u>	<u>—</u>	<u>12,300</u>	<u>—</u>	<u>—</u>	<u>—</u>
<b>Total intangible assets . . . . .</b>		<u><b>\$117,100</b></u>	<u><b>\$26,584</b></u>	<u><b>\$90,516</b></u>	<u><b>\$111,550</b></u>	<u><b>\$25,193</b></u>	<u><b>\$86,357</b></u>

For the nine-month period ended December 31, 2012, the Company recorded an impairment charge of \$522 related to certain PV intangible assets related to customer relationships in connection with the idling the Company's HiCz materials business.

Amortization expense for intangible assets was \$7,619, \$8,198 and \$4,500, for the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, respectively.

The weighted average remaining amortization periods for the (i) photovoltaic (ii) polysilicon and (iii) sapphire intangibles were 7.73, 0 and 6.47 years, respectively, as of December 31, 2012. As of

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**4. Goodwill and Intangible Assets (Continued)**

December 31, 2012, the estimated future amortization expense for the Company's intangible assets is as follows:

Year Ending December 31,	Amortization Expense
2013 .....	\$ 9,820
2014 .....	9,799
2015 .....	9,770
2016 .....	9,437
2017 .....	8,970
Thereafter .....	30,420

**5. Customer Concentrations**

The following customers comprised 10% or more of the Company's total accounts receivable or revenues as of or for the periods indicated:

	Nine-Month Period Ended December 31, 2012		Fiscal Years Ended				As of			
			March 31, 2012		April 2, 2011		December 31, 2012		March 31, 2012	
	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Accounts Receivable	% of Total	Accounts Receivable	% of Total
Photovoltaic Customers										
Customer #1 .....	*	*	*	*	\$172,627	19%	*	*	*	*
Customer #2 .....	*	*	*	*	*	*	\$2,478	10%	*	*
Polysilicon Customers										
Customer #3(1) .....	\$129,894	34%	\$187,336	20%	*	*	*	*	\$ 6,704	10%
Customer #4 .....	78,226	21%	*	*	*	*	*	*	*	*
Customer #5 .....	49,055	13%	*	*	*	*	3,248	14%	*	*
Customer #6 .....	*	*	*	*	*	*	9,085	38%	*	*
Sapphire Customers										
Customer #7 .....	*	*	*	*	*	*	*	*	20,084	31%
Customer #8 .....	*	*	*	*	*	*	*	*	12,852	20%

\* Amounts from these customers were less than 10% of the total as of or for the respective period.

- (1) Total revenue recognized from this customer for the nine-month period ended December 31, 2012 was \$130,912, or 34% of total revenue and \$223,723 or 23% of total revenue for the fiscal year ended March 31, 2012. Not included in the table above for the nine-month period ended December 31, 2012 and the fiscal year ended March 31, 2012 is \$1,018, or less than 1%, and \$36,387, or 4%, respectively, of total revenue recognized for those periods for sales to this customer that have been included in the sapphire business.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
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**5. Customer Concentrations (Continued)**

The Company requires most of its customers to either post letters of credit or make advance payments of a portion of the selling price prior to delivery. Approximately \$16,557 (or 69%) and \$50,833 (or 77%) of total accounts receivable as of December 31, 2012 and March 31, 2012, respectively, were secured by letters of credit.

**6. Inventories**

Inventories consisted of the following:

	<u>December 31, 2012</u>	<u>March 31, 2012</u>
Raw materials .....	\$ 97,957	\$165,725
Work-in-process .....	5,100	7,837
Finished goods .....	30,229	19,733
	<u>\$133,286</u>	<u>\$193,295</u>

During the nine month period ended December 31, 2012 the Company recorded write-downs of inventories of \$68,635, comprised of \$63,123 of inventory in the PV business, \$5,169 of inventory in the sapphire business and \$343 of inventory in the polysilicon business.

As further described under "Recent Developments" in Note 1 above, including, (i) oversupply of, or limited demand for, end products that are manufactured with equipment sold by the Company, (ii) ongoing trade disputes between the U.S., European Union and South Korea, on the one hand, and China on the other, which have adversely impacted the businesses of the Company's customers, (iii) liquidity challenges being faced by companies in the polysilicon, PV and sapphire industries and (iv) the deterioration of our customers financial condition, the Company determined in December 2012 that these factors contributed to the Company's determination that the vast majority of its DSS backlog is expected to be terminated and future sales of DSS products will be limited. As a result of these factors, during December 2012, the Company incurred charges of \$60,192 to record PV inventory at its net realizable value, which considers the Company's estimate of forecasted sales of units and selling prices. Additionally, the Company recorded charges of \$8,352 in cost of sales, in connection with impairing all amounts that had been advanced to the Company's vendors for production of PV inventory. As further described in Note 14, *Commitments and Contingencies*, the Company has purchase commitments to procure additional components of inventory. The Company expects to terminate certain of these arrangements. Additional losses will be incurred for any amounts that are paid in connection with the contract terminations. In the event that our forecasted selling prices or units sold are inaccurate, additional charges may be incurred.

**7. Other Assets**

Other assets consisted of the following:

	<u>December 31, 2012</u>	<u>March 31, 2012</u>
Inventory .....	\$33,834	\$ —
Vendor advances .....	20,664	10,416
Deferred financing fees .....	8,787	3,273
Deferred income taxes .....	15,424	—
Other .....	8,211	6,617
	<u>\$86,920</u>	<u>\$20,306</u>

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**8. Property, Plant and Equipment**

Property, plant and equipment consisted of the following:

	<u>Estimated Useful Life</u>	<u>December 31, 2012</u>	<u>March 31, 2012</u>
Leasehold improvements . . . . .	Lesser of useful life or initial lease term	\$ 21,621	\$ 28,313
Land . . . . .	—	1,074	1,074
Land improvements . . . . .	15 years	326	326
Building . . . . .	40 years	17,375	17,054
Machinery and equipment . . . . .	3 to 7 years	54,471	58,776
Computer equipment and software . . . . .	3 to 5 years	11,427	12,147
Furniture and fixtures . . . . .	5 to 7 years	2,597	2,703
		<u>108,891</u>	<u>120,393</u>
Less accumulated depreciation . . . . .		<u>(30,911)</u>	<u>(20,411)</u>
		<u>\$ 77,980</u>	<u>\$ 99,982</u>

Property, plant and equipment impairment charges of \$1,018 were recorded in connection with the restructuring plan undertaken by the Company in October 2012 and in connection with the idling of the Hazelwood facility, the Company recorded impairment charges of \$27,769 to write-down certain long-lived assets, primarily leasehold improvements and machinery and equipment. Please refer to Note 11, *Restructuring Charges and Asset Impairments* for additional information.

Software costs incurred as part of an enterprise resource systems project of \$404 and \$2,067 were capitalized during the nine-month period ended December 31, 2012 and the fiscal year ended March 31, 2012, respectively. Depreciation expense for the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, was \$15,100, \$9,650 and \$5,167, respectively.

**9. Warranty and Qualifying Accounts**

*Warranty*

The following table presents warranty activities:

	<u>Nine-Month Period Ended December 31, 2012</u>	<u>Fiscal Year Ended</u>	
		<u>March 31, 2012</u>	<u>April 2, 2011</u>
Product warranty liability, beginning of the period . . . . .	\$ 6,225	\$ 6,943	\$ 1,280
Accruals for warranties issued . . . . .	11,534	5,984	10,982
Payments under warranty . . . . .	<u>(7,048)</u>	<u>(6,702)</u>	<u>(5,319)</u>
Product warranty liability, end of period . . . . .	<u>\$10,711</u>	<u>\$ 6,225</u>	<u>\$ 6,943</u>

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**9. Warranty and Qualifying Accounts (Continued)**

*Allowance for Doubtful Accounts*

The following table presents allowance for doubtful accounts:

	Nine-Month Period Ended December 31, 2012	Fiscal Year Ended	
		March 31, 2012	April 2, 2011
Allowance for doubtful accounts, beginning of period	\$ 5,422	\$2,536	\$ 2,620
Charges to expense	569	671	205
Reclassification from deferred revenue	176	2,249	932
Write offs	<u>(3,064)</u>	<u>(34)</u>	<u>(1,221)</u>
Allowance for doubtful accounts, end of the period	<u>\$ 3,103</u>	<u>\$5,422</u>	<u>\$ 2,536</u>

**10. Long Term Debt and Revolving Credit Facility**

*Credit Suisse Credit Agreement*

On December 13, 2010, the Company entered into a credit agreement, with Credit Suisse AG, Cayman Islands Branch, (“Credit Suisse”) as administrative agent and collateral agent, and the lenders from time to time, party to the credit agreement. This credit agreement consisted of a term facility, in an aggregate maximum principal amount of \$125,000 with a final maturity date of December 13, 2013 and a revolving facility, in an aggregate maximum principal amount of \$75,000 with a final maturity date of December 13, 2013.

In November 2011, the Company terminated this credit agreement with Credit Suisse, as amended, and the Guarantee and Collateral Agreement which was entered into at the time the credit agreement was executed in order to secure the obligations under such credit agreement. On November 15, 2011, the Company paid \$91,267 to settle amounts owed under the term facility, which included principal of \$90,938 and accrued interest of \$329. There were no amounts outstanding under the revolving facility at the time this credit facility was terminated.

Interest expense recorded in connection with the credit facility with Credit Suisse was \$12,281 for the fiscal year ended March 31, 2012, which includes amortization of debt fees, as well as the associated commitment fees. Included in this amount is an interest expense charge of \$6,103 related to the unamortized portion of deferred financing costs, which were written off in connection with the termination of this credit agreement. There were no expenses recorded during the nine-month period ended December 31, 2012 in connection with this credit agreement.

*Bank of America Credit Agreement*

On January 31, 2012, the Company, its U.S. operating subsidiary (the “U.S. Borrower”) and its Hong Kong subsidiary (the “Hong Kong Borrower”) entered into a credit agreement (the “2012 Credit Agreement”), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer (or “Bank of America”) and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the “2012 Term Facility”) provided to the U.S. Borrower in an aggregate principal amount of \$75,000 with a final maturity date of January 31, 2016, a revolving credit facility (the “U.S. Revolving Credit Facility”) available to the U.S. Borrower in an aggregate principal



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
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**10. Long Term Debt and Revolving Credit Facility (Continued)**

amount of \$25,000 with a final maturity date of January 31, 2016 (this revolving facility is no longer available pursuant to the 2013 Amendment (as described below)) and a revolving credit facility (the “Hong Kong Revolving Credit Facility”; together with the U.S. Revolving Credit Facility, the “2012 Revolving Credit Facility”; and together with the 2012 Term Facility, the “2012 Credit Facilities”) available to the Hong Kong Borrower in an aggregate principal amount of \$150,000 (which was reduced to \$125,000 pursuant to the 2013 Amendment) with a final maturity date of January 31, 2016.

On various dates between June 15, 2012 and June 25, 2012, the Company, the U.S. Borrower and the Hong Kong Borrower requested and received approval for increases in the 2012 Term Facility for the U.S. Borrower in an aggregate amount equal to \$70,000 (the “Incremental Term Loans”) pursuant to the 2012 Credit Agreement.

As a result of the Incremental Term Loans, the aggregate term loan under the 2012 Credit Agreement was increased from \$75,000 to \$145,000, all of which was borrowed by the U.S. Borrower. The Company agreed to pre-pay \$40,000 of the 2012 Term Facility pursuant to the 2013 Amendment which payment did not reduce the amortization of the Term Loan.

All of the material terms and conditions related to the Incremental Term Loans were identical to the terms and conditions that apply to the 2012 Term Facility, including the final maturity date of January 30, 2016 and the interest rate, which in each case is equal to, at the option of the U.S. Borrower, Bank of America’s prime rate plus a margin of 2.00% or LIBOR plus a margin of 3.00%. The Incremental Term Loans amortize over the same period, and in proportional amounts, as the 2012 Term Facility, commencing with the first amortization payment under both term facilities in June 2012.

The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America’s prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00% (such interest rates were increased pursuant to the 2013 Amendment). The 2012 Term Facility amortizes in equal quarterly amounts which in the aggregate equal 5% of the original principal amount of the 2012 Term Facility in each of years 1 and 2 of the loan and 10% of the original principal amount of the 2012 Term Facility in each of years 3 and year 4 of the loan, with the balance payable on January 31, 2016. The 2012 Credit Facilities are subject to mandatory prepayment (as further described below) in the event that the Company has excess cash flow or receives cash proceeds from any asset sale, casualty event or issuance of indebtedness not otherwise permitted under the 2012 Credit Agreement during any fiscal year, subject to certain thresholds and other exceptions. The 2012 Credit Facilities also requires the Company to comply with certain covenants, including financial ratio covenants (as described further below and as modified pursuant to the 2013 Amendment). Proceeds of the 2012 Term Facility and 2012 Revolving Credit Facility are available for use by the Company and certain of its subsidiaries for general corporate purposes; however, the use of the 2012 Revolving Facility is restricted to use in connection with letters of credit. The full amount of the 2012 Term Facility was drawn by the U.S. Borrower on January 31, 2012 and no amounts have been drawn on the 2012 Revolving Credit Facility as of such date. The Company will use the 2012 Revolving Credit Facility in connection with the issuance of letters of credit up to the aggregate principal amount of the 2012 Revolving Credit Facility or for other purposes as permitted under the 2012 Revolving Credit Facility and the 2013 Amendment.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**10. Long Term Debt and Revolving Credit Facility (Continued)**

The borrowings under the 2012 Term Facility and the U.S. Revolving Credit Facility are secured by a lien on substantially all of the tangible and intangible property of the Company and its wholly-owned domestic subsidiaries (including the U.S. Borrower), including but not limited to accounts receivable, inventory, equipment, general intangibles, certain investment property, certain deposit and securities accounts, certain owned real property and intellectual property, and a pledge of the capital stock of each of the Company's wholly-owned domestic subsidiaries (limited in the case of pledges of capital stock of any foreign subsidiaries, to 65% of the capital stock of any first-tier foreign subsidiary), subject to certain exceptions and thresholds, and the repayment of such proceeds is guaranteed by the Company and its wholly-owned domestic subsidiaries. The proceeds of the Hong Kong Revolving Facility are secured by a lien on substantially all of the tangible and intangible property of the Hong Kong Borrower (and, if requested by the lenders, certain subsidiaries of the Hong Kong Borrower), including but not limited to accounts receivable, inventory, equipment, general intangibles, certain investment property, certain deposit and securities accounts, certain owned real property and intellectual property, and a pledge of the capital stock of the Hong Kong Borrower, subject to certain exceptions and thresholds, and the repayment of such proceeds is guaranteed by the Company and its wholly-owned domestic subsidiaries.

Interest expense related to 2012 Term Facility and 2012 Revolving Credit Facility was \$4,034 for the nine-month period ended December 31, 2012 and \$729 for the fiscal year ended March 31, 2012, which includes amortization of debt fees related to both facilities, as well as the associated commitment fees. The weighted average interest rate at December 31, 2012 was 3.22%. Interest capitalized on construction-in-process contracts for the fiscal year ended December 31, 2012 was \$188. The balance of deferred financing costs at December 31, 2012 was \$3,689 and is included in other assets on the consolidated balance sheet.

The Company uses amounts available under the 2012 Revolving Facilities in connection with standby letters of credit related to customer deposits. As of December 31, 2012, the Company had \$33,540 of outstanding letters of credit pursuant to the 2012 Revolving Facilities resulting in \$141,460 of available credit under the 2012 Revolving Facilities. The Credit Agreement allows the Company to cash collateralize letters of credit up to an amount of \$35,000 to the extent that outstanding standby letters of credit exceed the amount of our collective 2012 Revolving Credit Facility in the U.S. and Hong Kong (in connection with the 2013 Amendment, the U.S. Revolving Credit Facility is no longer available).

On September 24, 2012, the lenders authorized the Company to issue the Notes (described below) and to enter into the convertible note hedge and warrant transactions pursuant to an amendment (the "2012 Amendment") to the 2012 Credit Agreement.

In addition, the 2012 Amendment imposes a minimum liquidity test that must be met in order to make a cash payment to the holders of Notes in connection with any conversion event in respect of the Notes. In order to make such a payment, the Company must have a combined minimum of \$150,000 in unrestricted cash and cash equivalents and availability under the 2012 Revolving Credit Facility.

The 2012 Amendment also provides that, the maximum consolidated leverage ratio covenant under the 2012 Credit Agreement will be calculated on a net leverage basis, taking into account up to \$100,000 of cash and cash equivalents held by the Company and its subsidiaries in the United States.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**10. Long Term Debt and Revolving Credit Facility (Continued)**

This net leverage feature will also impact the leverage tests under the 2012 Credit Agreement for certain permitted acquisitions and other permitted investments. In addition, the maximum consolidated leverage ratio covenant and the other leverage tests will exclude obligations under performance letters of credit.

The Company may, at its option, prepay borrowings under the 2012 Credit Agreement (in whole or in part), at anytime without penalty subject to conditions set forth in the 2012 Credit Facility. The Company is required to make mandatory prepayments (the following description gives effect to the 2013 Amendment):

- of the lesser of (i) 25,000 or (ii) 50% of excess cash flow (as defined in the 2012 Credit Agreement) in any fiscal period or fiscal year subsequent to March 31, 2012 (as reduced by voluntary repayments of the 2012 Term Facility);
- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) of all asset sales or other dispositions (including certain involuntary dispositions) of property by the Company and its subsidiaries in excess of \$5,000, subject to certain exceptions, including that such \$5,000 threshold will not apply during the 2013 Amendment waiver period (as defined below);
- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) of extraordinary receipts by the Company and its subsidiaries in excess of \$5,000, subject to certain exceptions including that no such prepayment will be required during the 2013 Amendment waiver period (as defined below);
- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) from non-permitted indebtedness by the Company, subject to certain exceptions; and
- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) from sales of equity interests to third parties.

The 2012 Credit Agreement imposes certain financial covenants on the Company and its subsidiaries, including, (i) minimum ratio of consolidated adjusted earnings-before-interest-taxes-depreciation and amortization ("EBITDA") (as defined in the 2012 Credit Agreement) to consolidated interest charges (as defined in the 2012 Credit Agreement) of 3.50 to 1.00 at the end of any period of four consecutive fiscal quarters and (ii) maximum leverage ratio (as defined in the Credit Agreement) of 2.0 to 1.0 at the end of any period of four consecutive fiscal quarters (as such financial covenant was modified by the 2012 Amendment and 2013 Amendment).

The 2012 Credit Agreement requires that the Company and its subsidiaries comply with covenants relating to customary matters (in addition to the financial covenants described above), including with respect to incurring indebtedness and liens, using the proceeds received under the 2012 Credit Agreement, transactions with affiliates, making investments and acquisitions, effecting mergers and asset sales, prepaying indebtedness, and restrictions on the Company's ability to pay dividends to shareholders (as the covenants were modified by the 2013 Amendment).

The 2012 Credit Agreement includes events of default relating to customary matters, including, among other things, nonpayment of principal, interest or other amounts; violation of covenants; inaccuracies in the representations and warranties in any material respect; cross default and cross

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**10. Long Term Debt and Revolving Credit Facility (Continued)**

acceleration with respect to indebtedness in an aggregate principal amount of \$10,000 or more; bankruptcy or similar proceedings or events; judgments involving liability of \$10,000 or more that are not paid; ERISA events; actual or asserted invalidity of guarantees or security documents; and change of control. Events of default can trigger, among other things, acceleration of payment of all outstanding principal and interest under the 2012 Credit Agreement.

On February 27, 2013, the Company (and the U.S. Borrower and Hong Kong Borrower), Bank of America N.A. and certain Lenders agreed to amend (the "2013 Amendment") certain provisions of the 2012 Credit Agreement. The 2013 Amendment waives the application of the maximum leverage ratio and interest coverage ratio through June 2014 (the "waiver period"). Through this action the Company avoids the possibility of a breach to these covenants. In addition, the 2013 Amendment provides that (i) the Company pay down the 2012 Term Facility by \$40,000 (leaving a balance of \$100,000 principal amount of the 2012 Term Facility), (ii) the interest rate payable on the loan is increased by 1.5% (which increase drops to 0.75% after the waiver period), (iii) the U.S. Revolving Credit Facility be eliminated and reduces the Hong Kong Revolving Credit Facility to \$125,000 (and providing that such amounts available under the Hong Kong Revolving Credit Facility may only be used for letters of credit during the waiver period), (iv) the Company comply with new covenants during the waiver period to maintain at all times minimum levels of liquidity (as defined in the 2013 Amendment), and quarterly cumulative minimum amounts of Consolidated Adjusted Earnings Before Interest, Tax, Depreciation and Amortization, (as defined in the 2013 Amendment), (v) certain other covenants are revised, including with respect to restrictions on the incurrence of certain additional debt, making certain investments, affiliate transactions and further restrictions on the payment of dividends and making certain stock repurchases (as described in the 2013 Amendment), (vi) we pay certain fees to the Lenders and (vii) that certain subsidiaries of the Hong Kong Borrower will provide guarantees and collateral to support the Hong Kong Revolving Facility.

***3.00% Convertible Senior Notes due 2017***

On September 28, 2012, the Company issued \$220,000 aggregate principal amount of 3.00% Convertible Senior Notes due 2017 (the "Notes"). The net proceeds from the issuance of the Notes were approximately \$212,592, after deducting fees paid to the initial purchasers and other offering costs. The Notes are senior unsecured obligations of the Company, which pay interest in cash semi-annually (on April 1 and October 1 of each year) at a rate of 3.00% per annum beginning on April 1, 2013. The Notes are governed by an Indenture dated September 28, 2012 with U.S. Bank National Association, as trustee (the "Indenture"). The Notes are not redeemable by the Company.

The Notes will mature on October 1, 2017, unless earlier repurchased or converted in accordance with their terms prior to such date. The Notes may be converted, under the conditions specified below, based on an initial conversion rate of 129.7185 shares of common stock per \$1,000 principal amount of Notes (which represents an initial effective conversion price of the Notes of \$7.71 per share), subject to adjustment as described in the Indenture.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**10. Long Term Debt and Revolving Credit Facility (Continued)**

The Notes may be converted by the holder, in multiples of \$1,000 principal amount, only under the following circumstances:

- prior to April 1, 2017, during any calendar quarter commencing after the calendar quarter ending on December 31, 2012 (and only during such calendar quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- prior to April 1, 2017, during the five business day period after any five consecutive trading day period in which the trading price (as defined in the Indenture) per \$1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day;
- prior to April 1, 2017, upon specified corporate events;
- on or after April 1, 2017 until the close of business on the second scheduled trading day immediately preceding the maturity date, regardless of the foregoing circumstances.

Upon conversion, the Company will pay or deliver, as the case may be, cash, shares of its common stock or a combination of cash and shares of its common stock, at its election. If the Company satisfies its conversion obligation solely in cash or through payment and delivery, as the case may be, of a combination of cash and shares of its common stock, the amount of cash and shares of common stock, if any, due upon conversion will be based on a daily conversion value (as described in the Indenture) calculated on a proportionate basis for each trading day in a 40 consecutive trading-day conversion period (as described in the Indenture).

In addition, following certain corporate events that occur prior to the maturity date (as described in the Indenture), the Company will increase the conversion rate for a holder of the Notes who elects to convert its Notes in connection with such a corporate event in certain circumstances.

As of December 31, 2012, the "if converted value" does not exceed the principal amount of the Notes.

In accordance with accounting guidance for debt with conversion and other options, the Company accounted for the liability and equity components of the Notes separately. The estimated fair value of the liability component at the date of issuance was \$154,884 and was computed based on the fair value of similar debt instruments that do not include a conversion feature. The equity component of \$65,116 was recognized as a debt discount and represents the difference between the \$220,000 of gross proceeds from the issuance of the Notes and the \$154,884 estimated fair value of the liability component at the date of issuance. The debt discount is being amortized over a five-year period ending October 1, 2017, which represents the expected life of a similar debt instrument without the equity component.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
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**10. Long Term Debt and Revolving Credit Facility (Continued)**

Costs of \$7,408 related to the issuance of the Notes were allocated to the liability and equity components in proportion to the allocation of the proceeds and accounted for as capitalized debt issuance costs and equity issuance costs, respectively.

The effective interest rate on the liability component of the Notes was 10.7% as of December 31, 2012. Interest expense incurred in connection with the Notes consisted of the following:

	<u>Nine-Month Period Ended December 31, 2012</u>
Contractual coupon rate of interest .....	\$1,686
Discount amortization .....	<u>2,556</u>
Interest expense—Convertible Notes .....	<u>\$4,242</u>

The carrying value of the Notes consisted of the following:

	<u>December 31, 2012</u>
Principal balance .....	\$220,000
Discount, net of accumulated amortization of \$2,556 .....	<u>(62,560)</u>
Carrying amount .....	<u>\$157,440</u>

The Company will be required to repay the following principal amounts under the 2012 Term Facility, Incremental Term Loans and Notes:

<u>Year Ending December 31,</u>	<u>Principal Payments</u>
2013 .....	\$ 7,250
2014 .....	12,688
2015 .....	14,500
2016 .....	105,125(1)
2017 .....	<u>220,000</u>
Total .....	<u>\$359,563</u>

- (1) Pursuant to the 2013 Amendment, the Company pre-paid \$40,000 under the term facility components of its Credit Facility with Bank of America N.A. This amount reduces the principal payment due in 2016.

***Convertible Note Hedge Transactions and Warrant Transactions***

In connection with the offering of the Notes, the Company entered into separate convertible note hedging transactions and warrant transactions with multiple counterparties.

Pursuant to the convertible note hedges, the Company purchased call options on its common stock, under which the Company has the right to acquire from the counterparties up to 28,500 shares of its common stock, or an equivalent amount in cash or a combination of cash and shares, subject to customary anti-dilution adjustments, at a strike price of \$7.71, that is equal to the initial conversion

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
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**10. Long Term Debt and Revolving Credit Facility (Continued)**

price of the Notes. The Company's exercise rights under the call options trigger upon conversion of the Notes and the call options terminate upon the maturity of the Notes, or the first day the Notes are no longer outstanding. The convertible note hedges may be settled in cash, shares of the Company's common stock, or a combination thereof, at the Company's option, and are intended to reduce the Company's exposure to potential cash payments or potential dilution upon conversion of the Notes. The Company paid \$57,923 for the convertible note hedges, which was recorded as a reduction to additional paid-in capital.

The Company also sold warrants (the "Warrants") to multiple counterparties that provide the counterparties rights to acquire from us up to approximately 28,500 shares of our common stock. The strike price of the Warrants will initially be \$9.9328 per share, which is 67.5% above the last reported sale price of the Company's common stock on September 24, 2012. The Warrants expire incrementally on a series of expiration dates following the maturity dates of the Notes. At expiration, if the market price per share of the Company's common stock exceeds the strike price of the Warrants, the Company will be obligated to issue shares of the Company's common stock having a value equal to such excess. The Warrants could have a dilutive effect on earnings per share to the extent that the market value per share of the Company's common stock exceeds the strike price of the Warrants. Proceeds received from the warrant transactions totaled \$41,623 and were recorded as additional paid-in capital.

The convertible note hedge and warrants meet the indexation and classification requirements to be accounted for within equity. As such, the net cost of the convertible note hedge and warrant transactions have been recognized within additional paid-in capital on the Company's consolidated balance sheets and their fair values will not be subsequently re-measured and adjusted as long as these instruments continue to qualify for equity classification.

**11. Restructuring Charges and Asset Impairments**

*October 2012 Restructuring*

As part of a program to reduce costs and increase operational efficiencies, the Company announced, on October 31, 2012, a plan to streamline worldwide operations to better align its cost structure with current market conditions by reducing its global workforce and closing or consolidating certain facilities. In connection with this program, the Company recorded \$3,659 of restructuring and asset impairment expense during the quarter ended December 31, 2012, including \$2,465 of severance and related benefits to reduce the Company's workforce. These costs have been allocated to our reportable segments as follows: \$438 to our PV business, \$168 to our polysilicon business, \$706 to our sapphire business and \$1,153 of these expenses were included in unallocated corporate costs. The Company also recorded \$176 related to costs associated with exiting a leased facility in Shanghai and \$1,018 for the write-down of assets associated with the facility consolidations, which have been allocated to our PV business. The Company expects to complete the payments related to severance and related benefits and the facilities in fiscal 2013. The Company does not expect additional charges related to this program to be material.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**11. Restructuring Charges and Asset Impairments (Continued)**

*Hazelwood Facility Idling*

On January 10, 2013, the Company announced its plan to cease operations at its Hazelwood, Missouri facility ("Hazelwood facility"). The idling of the Hazelwood facility is part of the Company's effort to reduce costs and optimize its R&D activities and the idling of the facility is expected to be completed on or before March 30, 2013. In connection with this action, the Company terminated the employment of 37 of the Hazelwood facility employees at various dates in the first quarter of fiscal 2013. The Company determined that as of December 31, 2012 it was probable that employees would be entitled to receive severance and related benefits and that these amounts were estimable and accordingly recorded the expense during the quarter ended December 31, 2012. In connection with the idling of the Hazelwood facility, the Company recorded \$29,782 of restructuring and asset impairment expense during the quarter ended December 31, 2012 to the PV segment, comprised of \$521 of severance and related benefits and \$29,261 for the write-down to fair value of certain long-lived, intangible assets and other assets associated with the Hazelwood facility. At December 31, 2012 the remaining fair value of the long-lived asset group of the Hazelwood facility was \$5,165. The Company expects to complete the payments related to severance and related benefits in fiscal 2013. The Company expects to incur approximately \$2,000 to \$4,000 of additional expense, primarily lease exits costs, in 2013 related to the idling of the Hazelwood facility.

The Company reports expense for its restructuring charges and asset impairments separately in the consolidated statements of operations. The restructuring charges and remaining accrued expenses, which are included in accrued expenses on our consolidated balance sheets as of December 31, 2012 are as follows:

	<u>Employee Related Benefits</u>	<u>Lease Exit Costs</u>	<u>Asset Impairments</u>	<u>Total</u>
Restructuring and impairment charges . . .	\$2,986	\$176	\$ 30,279	\$ 33,441
Cash payments . . . . .	(910)	(43)	—	(953)
Asset impairment . . . . .	—	—	(30,279)	(30,279)
Balance as of December 31, 2012 . . . . .	<u>\$2,076</u>	<u>\$133</u>	<u>\$ —</u>	<u>\$ 2,209</u>

**12. Employee Benefit Plan**

The Company has a 401(k) employee savings plan for its eligible employees. Eligible employees may elect to contribute a percentage of their salaries up to the annual Internal Revenue Code maximum limitations. The 401(k) employee savings plan allows the Company to make discretionary matching contributions for its participating employees. For the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, the Company made discretionary contributions of \$1,658, \$2,036 and \$1,004, respectively.



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**13. Income Taxes**

The provision for income taxes is comprised of:

	<b>Nine-Month Period Ended</b>	<b>Fiscal Year</b>	
	<b>December 31, 2012</b>	<b>March 31, 2012</b>	<b>April 2, 2011</b>
Current:			
Federal .....	\$ 31,180	\$42,569	\$38,895
State .....	2,888	7,533	537
Foreign .....	702	27,953	22,862
Total current .....	<u>\$ 34,770</u>	<u>\$78,055</u>	<u>\$62,294</u>
Deferred:			
Federal .....	\$(28,136)	\$11,202	\$26,417
State .....	(4,472)	(1,271)	6,834
Foreign .....	<u>(15,896)</u>	<u>(1,445)</u>	<u>298</u>
Total deferred .....	<u>\$(48,504)</u>	<u>\$ 8,486</u>	<u>\$33,549</u>
Total (benefit) provision for income taxes .....	<u><u>\$(13,734)</u></u>	<u><u>\$86,541</u></u>	<u><u>\$95,843</u></u>

A component of the current tax (benefit) provision for the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011 includes an accrual for noncurrent tax related to uncertain tax benefits of \$177, \$8,339 and \$16,287, respectively.

Income before (benefit) provision for income taxes is as follows:

	<b>Nine-Month Period Ended</b>	<b>Fiscal Year</b>	
	<b>December 31, 2012</b>	<b>March 31, 2012</b>	<b>April 2, 2011</b>
Domestic .....	(40,348)	126,422	135,002
Foreign .....	<u>(115,694)</u>	<u>143,516</u>	<u>135,596</u>
Total .....	<u><u>(156,042)</u></u>	<u><u>269,938</u></u>	<u><u>270,598</u></u>

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**13. Income Taxes (Continued)**

The U.S. federal income tax rate is reconciled to the Company's effective tax rate as follows:

	Nine-Month Period Ended	Fiscal Year Ended	
	December 31, 2012	March 31, 2012	April 2, 2011
Tax at federal statutory rate . . . . .	\$(54,615)	\$ 94,478	\$ 94,709
State income tax, net of U.S. federal benefit . . . . .	(1,029)	4,071	4,791
IRC Section 199 deduction . . . . .	—	(624)	(1,346)
Foreign income taxes at rates different than domestic rates . . . . .	17,503	(28,793)	(24,552)
Effect of foreign operations included in U.S. federal provision . . . . .	110	3,306	3,734
Foreign permanent items . . . . .	8,997	6,021	68
Non-deductible goodwill . . . . .	19,963		
Reserves for uncertain tax benefits . . . . .	1,045	8,185	17,564
Research credits . . . . .	4	(798)	(1,585)
Non-deductible contingent consideration expense . . . . .	(3,397)	1,513	792
Other . . . . .	(2,315)	(818)	1,668
	<u>\$(13,734)</u>	<u>\$ 86,541</u>	<u>\$ 95,843</u>

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**13. Income Taxes (Continued)**

Significant components of the Company's deferred tax assets and liabilities are as follows:

	<u>December 31, 2012</u>	<u>March 31, 2012</u>
Deferred tax assets:		
Deferred revenue . . . . .	\$22,188	\$ 40,671
Reserves not currently deductible . . . . .	10,939	6,774
Equity compensation . . . . .	5,612	5,258
Allowance for doubtful accounts . . . . .	398	1,256
Contingent consideration . . . . .	2,051	—
State credits and fixed assets . . . . .	820	1,746
Loss carry-forward . . . . .	14,116	—
Other . . . . .	879	338
Total deferred tax assets . . . . .	<u>\$57,003</u>	<u>\$ 56,043</u>
Deferred tax liabilities:		
Deferred costs . . . . .	4,672	37,829
Fixed assets . . . . .	4,824	17,365
Intangibles . . . . .	23,713	25,910
Hedges on convertible note . . . . .	2,634	—
	<u>35,843</u>	<u>81,104</u>
Net deferred tax assets (liabilities) . . . . .	<u>\$21,160</u>	<u>\$(25,061)</u>
Reported as:		
Deferred income taxes—current . . . . .	\$28,309	\$ 13,857
Deferred income taxes—long-term . . . . .	<u>(7,149)</u>	<u>(38,918)</u>
	<u>\$21,160</u>	<u>\$(25,061)</u>

As of December 31, 2012, the Company had net operating losses in Hong Kong of approximately \$84,599. These net operating losses may be carried forward indefinitely. On January 2, 2013 the U.S. research and experimentation tax credit was extended through calendar 2013 and retroactive to January 1, 2012. The Company expects to record a discrete tax benefit of approximately \$1,300 in the first quarter of 2013 for the credit related to the three-month period ended March 31, 2012 and the nine-month period ended December 31, 2012.

As of December 31, 2012, the Company had state investment tax and research credit carryforwards of approximately \$613 and \$649, respectively. These credits begin to expire in fiscal 2015, unless converted to unlimited status. The Company also has approximately \$3,500 in state net operating losses that may be carried forward for 7 years. Based on the Company's forecasts of future taxable income and history of profitability (including cumulative profitability over the last three years within the primary tax jurisdictions), it anticipates that it is more-likely-than-not that the results of future operations will generate sufficient taxable income to allow the Company to realize the deferred tax assets. Therefore, the Company did not record a valuation allowance against its net deferred tax assets as of December 31, 2012. In determining the more-likely-than-not criterion, the Company evaluates all positive and negative evidence as of the end of each reporting period. The realization of the deferred

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**13. Income Taxes (Continued)**

tax assets ultimately depends on the existence of sufficient taxable income in either the carryback or carryforward periods under the tax law. If future events differ from the Company's current forecasts, a valuation allowance may need to be established which likely would have a material adverse effect on the Company's results of operations, financial condition and capital position. The Company will continue to update its assumptions and forecasts of future taxable income and assess the need for a valuation allowance.

It is the practice and intention of the Company to reinvest the earnings of its non-US subsidiaries in those operations. As of December 31, 2012, the Company has not made a provision for US or additional foreign withholding taxes on its undistributed earnings of approximately \$176,814, as these are considered permanently reinvested. Such earnings could become subject to US taxation if they were either remitted as dividends and under certain other circumstances. It is not practicable to estimate the amount of deferred tax liability related to investments in these foreign subsidiaries.

As of December 31, 2012, the Company had \$26,322 of unrecognized tax benefits, of which, approximately \$25,476 would affect the effective tax rate if recognized. A reconciliation of the beginning and ending amount of the unrecognized income tax benefits during the nine-month period ended December 31, 2012, and the fiscal years ended March 31, 2012 and April 2, 2011 are as follows:

	Nine-Month Period Ended	Fiscal Year Ended	
	December 31, 2012	March 31, 2012	April 2, 2011
Balance at beginning of period . . . . .	\$25,295	\$17,653	\$ 579
Increases related to current year tax positions . . . . .	177	7,823	16,211
Decreases related to prior year tax positions . . . . .	—	(158)	—
Increases related to prior year tax positions . . . . .	850	—	863
Decreases related to settlements with tax authorities . . . . .	—	(23)	—
Balance at end of period . . . . .	<u>\$26,322</u>	<u>\$25,295</u>	<u>\$17,653</u>

The Company also recognizes interest and penalties related to unrecognized tax benefits as a component of income tax expense. The Company recorded interest and penalties of \$283 as part of income tax expense for the nine-month period ended December 31, 2012. The Company has recorded accruals for interest and penalties of \$1,925, \$1,057 and \$541 as of December 31, 2012, March 31, 2012, and April 2, 2011 respectively.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is subject to examination by federal, state, and foreign tax authorities. The Company's U.S. tax returns are currently in appeals for fiscal years ending March 31, 2007 and 2008 and the Company plans to vigorously defend all tax positions taken. The Company is also under examination by the Internal Revenue Service, or IRS, for its fiscal years ending March 28, 2009 and April 3, 2010. In addition, the statute of limitations is open for all state and foreign jurisdictions. As of December 31, 2012, the Company has classified approximately \$1,936 of unrecognized tax benefits as short-term. These unrecognized tax benefits relate to positions under appeals for the fiscal 2007 and fiscal 2008 tax years.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**14. Commitments and Contingencies**

*Lease commitments*

The Company has entered into operating leases for office and warehouse facilities in the United States, China, Hong Kong and Taiwan. The terms of these leases range from 12 months to 13 years. Rent expense for the nine-month period ended December 31, 2012 the fiscal years ended March 31, 2012 and April 2, 2011, was \$4,004, \$4,770 and \$3,740, respectively. As of December 31, 2012, minimum annual payments under these agreements are as follows:

<u>Year ending December 31,</u>	<u>Minimum Annual Payments</u>
2013 .....	\$4,932
2014 .....	3,562
2015 .....	1,518
2016 .....	1,540
2017 .....	1,599
Thereafter .....	8,336

*Purchase Commitments*

The Company's commitments to purchase raw materials, research and development and other services from various suppliers are approximately \$214,611 as of December 31, 2012. The majority of these commitments are due within the next twelve months.

As a result of the factors outlined under the "Recent Developments" in Note 1 above, the Company expects to terminate purchase commitments for DSS inventory components in fiscal 2013 and beyond. These purchase contracts generally require a payment to the vendors to reimburse them for costs incurred, if any, through the termination date. No amount has been accrued as of December 31, 2012, as these purchase orders have not been terminated at December 31, 2012. The gross amount of remaining purchases under these purchase orders was \$18,683 as of December 31, 2012, and the Company may negotiate with the vendors to determine the amount payable upon termination of these purchase orders.

*Pledged Collateral*

In connection with the acquisition of Confluence Solar, the Company has acquired certain assets which are pledged as collateral against customer deposits of \$2,000 as of December 31, 2012.

*Litigation Contingencies*

Beginning on August 1, 2008, seven putative securities class action lawsuits were commenced in the United States District Court for the District of New Hampshire, or the Court, against the Company, certain of its officers and directors, certain underwriters of its July 24, 2008 initial public offering and others, including certain of its investors, together called the "federal class actions." In addition, on September 18, 2008 a putative securities class action was filed in New Hampshire state court in the Superior Court for Hillsborough County, Southern District, or the State Court, under the caption *Hamel v. GT Solar International, Inc., et al.*, against the Company, certain of its officers and directors

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**14. Commitments and Contingencies (Continued)**

and certain underwriters of its July 24, 2008 initial public offering, called the “state class action.” Both the federal class actions and the state class action asserted claims under various sections of the Securities Act of 1933, as amended. The plaintiffs in these actions alleged, among other things, that the defendants made false and materially misleading statements and failed to disclose material information in certain SEC filings, including the registration statement and prospectus for the Company’s July 24, 2008 initial public offering, and other public statements, regarding its business relationship with LDK Solar, Ltd., one of its customers, JYT Corporation, one of its competitors, and certain of its products, including the DSS furnaces.

On March 7, 2011, the Company announced that it had reached an agreement in principle to settle both the federal class actions and the state class action. The parties subsequently memorialized their agreement in a stipulation of settlement (the “Settlement Agreement”) that was filed with the Court. The Settlement Agreement provided, among other things, that: (i) the Company and all other defendants made no admission of liability or wrongdoing, (ii) the Company and all other defendants would receive a full and complete release of all claims that were or could have been brought against all defendants in both the federal and state securities actions, (iii) the Company would pay \$10,500 into a settlement fund. Of this amount, the Company contributed \$1,000 and the Company’s liability insurers contributed the remaining \$9,500. The Company’s contribution represented its contractual indemnification obligation to its underwriters.

On September 27, 2011, after a hearing to consider the fairness and adequacy of the settlement, the court entered a final judgment (the “Order”) approving the settlement and dismissing the federal class actions. Pursuant to the Settlement Agreement, the state class action was also dismissed as a result of the entry of the Order.

A derivative suit, captioned Fan v. GT Solar Int’l, Inc., et al., was filed in New Hampshire State Court on January 14, 2009, called the “derivative action.” The derivative complaint was asserted nominally on the Company’s behalf against certain of its directors and officers and alleges various claims for breach of fiduciary duty, unjust enrichment, abuse of control and gross mismanagement. The derivative action was premised on the same purported misconduct alleged in the federal class actions. The derivative action, which was not included in the settlement of the federal and state class actions, was voluntarily dismissed by the plaintiffs on August 22, 2012.

The Company is subject to various other routine legal proceedings and claims incidental to its business, which management believes will not have a material effect on the Company’s financial position, results of operations or cash flows.

***Customer Indemnifications***

In certain cases, the Company indemnifies, under pre-determined conditions and limitations, its customers for infringement of third-party intellectual property rights by the Company’s products or services (and, in limited instances, the Company also indemnifies other third parties for certain potential damages). The Company generally seeks to limit its liability for such indemnity to an amount not to exceed the sales price of the products or services (or the price paid for products or services) subject to its indemnification obligations, but not all agreements contain such limitations on liability.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**14. Commitments and Contingencies (Continued)**

The Company does not believe, based on information available, that it is probable that any material amounts will be paid under these indemnification provisions.

**15. Stockholders' Equity**

*Common Stock*

The Company has authorized 500,000 shares of common stock, \$0.01 par value, of which 119,293 shares were issued and outstanding at December 31, 2012.

On November 12, 2010, the Company repurchased 26,500 shares of its common stock from GT Solar Holdings, LLC ("Holdings") at a per share price of \$7.66, or an aggregate of approximately \$203,476. The shares were retired and the cost of the repurchase has been allocated to retained earnings and additional paid-in capital based on the additional paid-in capital related to the issue of common stock with the excess charged to retained earnings.

*Share Repurchase Program*

In November 2011, the Company's board of directors authorized a \$100,000 share repurchase program consisting of the purchase of \$75,000 of its common stock which was financed with existing cash through an accelerated share repurchase program, and the purchase of an additional \$25,000 of its common stock that may be made from time to time through open market repurchases or privately negotiated transactions, as determined by the Company's management. On November 18, 2011, the Company entered into an accelerated share repurchase agreement ("ASR") with UBS AG, under which the Company repurchased \$75,000 of its common stock. The effective per share purchase price was based on the average of the daily volume weighted average prices per share of the Company's common stock, less a discount, calculated during the term of the ASR. In connection with this agreement, in November 2011 the Company paid \$75,000 to UBS AG and at such time received 7,823 shares of the Company's common stock, of which:

- \$60,000, or 80%, represented the value, based on the closing price of the Company's common stock on November 18, 2011, of the 7,823 shares of Company common stock that UBS AG delivered to the Company in November 2011; and
- \$15,000, or 20%, represented an advance payment that, depending on the effective per share purchase price, either to cover additional shares UBS AG may be required to deliver to the Company or to be applied towards any additional amount that may be owed by the Company. This advanced payment was accounted for as a forward share repurchase contract in the statement of stockholders' equity, as a reduction to additional paid-in capital.

On March 6, 2012, the Company received notice from UBS of its intent to exercise and finalize the ASR transaction with a valuation date of March 5, 2012. Prior to this notice, on March 5, 2012, UBS delivered 900 shares of the Company's common stock in anticipation of having to deliver shares to the Company as part of the final settlement. UBS delivered these shares early, as was their right under the ASR contract. On March 8, 2012, UBS delivered another 715 shares of the Company's common stock pursuant to its notice of exercise to fully settle its obligations under the ASR agreement.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**15. Stockholders' Equity (Continued)**

The total number of shares received by the Company under the ASR was 9,438. This amount is comprised of the 7,823 initial shares, 900 early delivery shares and 715 final settlement shares. The effective per share repurchase price was \$7.95 per share based on the volume-weighted average share price of the Company's common stock, less a discount, during the ASR period. All of the shares received by the Company under the ASR program were canceled and retired upon receipt by the Company.

To account for changes in the fair value of the share repurchase contract from the trade date of November 18, 2011 to settlement date of November 23, 2011, the Company recorded a gain of \$3,344 for the fiscal year ended March 31, 2012 to other income to reflect an appreciation of the fair value of the share repurchase contract over the three day settlement period.

The excess of the cost of shares acquired over the par value was allocated to additional paid-in capital and retained earnings. As a result of the share repurchases, the Company reduced common stock and additional paid-in capital by an aggregate of \$13,744 and charged \$64,599 to retained earnings for the fiscal year ended March 31, 2012.

***Preferred Stock***

The Company has authorized 10,000 shares of undesignated preferred stock, \$0.01 par value, none of which was issued and outstanding at December 31, 2012 or March 31, 2012. The Company's board of directors is authorized to determine the rights, preferences and restrictions on any series of preferred stock to be issued.

**16. Share-Based Compensation**

The Company has established equity compensation plans that provide share-based compensation to eligible employees, directors, officers, as well as independent contractors performing services for the Company. The terms of awards made under the Company's equity compensation plans are generally determined by the Compensation Committee. On January 1, 2006, the Company adopted the 2006 Stock Option Plan (the "2006 Plan"). Under the 2006 Plan, options were granted to persons who were, at the time of grant, employees, officers or directors of, or consultants or advisors to, the Company. All of the options granted under the 2006 Plan were awarded prior to the Company's initial public offering and therefore the option price at the date of grant was determined based upon contemporaneous valuations. On June 30, 2008, in connection with the Company's initial public offering, the Company adopted the 2008 Equity Incentive Plan (the "2008 Plan"). The Company does not intend to issue any further equity awards under the 2006 or 2008 Plans. On August 24, 2011, the Company adopted the 2011 Equity Incentive Plan (the "2011 Plan"). The 2011 Plan reserves up to 12,500 shares of common stock for grants of stock options, restricted stock, restricted stock units and other share-based awards. The principal awards outstanding under these equity plans consist of grants of restricted stock units and stock options. As of December 31, 2012, an aggregate of 8,461 shares were authorized for future grant under our 2011 Plan.

Restricted stock units deliver the recipient a right to receive a specified number of shares of the Company's common stock upon vesting. The restricted stock units vest upon the passage of time or upon the completion of performance goals as it relates to the Company's performance based awards, as



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**16. Share-Based Compensation (Continued)**

defined at the grant date. Unlike stock options, there is no cost to the employee at share issuance. The Company values the restricted stock units at the fair value of the Company's common stock on the grant date, which is the closing price of the Company's common stock on the grant date.

Shares of common stock are issued to the holders of restricted stock units on the date the restricted stock units vest. The majority of shares issued are net of the statutory withholding requirements, which the Company pays on behalf of our participants. Prior to vesting, restricted stock units do not have dividend equivalents rights and do not have voting rights, and the shares underlying the restricted stock units are not considered issued and outstanding. Restricted stock units awarded typically vest 25% on each anniversary of the award over a 4 year period.

Performance-based restricted stock units awarded typically are earned upon the achievement of certain Company specific financial performance metrics and, if those metrics are achieved, the shares subject to the award vest typically on the second or third anniversary of the date of grant of the award.

The stock options issued under the Company's equity plans were issued with an exercise price equal to 100% of the market price of the Company's common stock on the date of grant and typically vest 25% on the first anniversary of the award of the remaining vesting 1/48th per month during the subsequent three years and expire ten years after grant. None of the Company's stock options were granted outside of the 2006 Plan, the 2008 Plan or the 2011 Plan. The Company grants options that allow for the settlement of vested stock options on a net share basis ("net settled stock options"), instead of settlement with a cash payment ("cash settled stock options"). With net settled stock options, the employee does not surrender any cash or shares upon exercise. Rather, the Company withholds the number of shares to cover the option exercise price and the minimum statutory tax withholding obligations from the shares that would otherwise be issued upon exercise.

The following table presents stock-based compensation expenses and related income tax benefits included in the Company's consolidated statement of operations:

	Nine-Month Period Ended	Fiscal Year Ended	
	December 31, 2012	March 31, 2012	April 2, 2011
General administrative expenses . . . . .	\$ 7,384	\$ 9,967	\$5,816
Selling and administrative expenses . . . . .	689	784	504
Research and development expenses . . . . .	1,779	2,210	762
Cost of sales . . . . .	1,153	1,766	1,142
Stock-based compensation expense . . . . .	<u>\$11,005</u>	<u>\$14,727</u>	<u>\$8,224</u>
Income tax benefit of stock-based compensation expense .	<u>\$ 4,020</u>	<u>\$ 5,418</u>	<u>\$3,218</u>

As of December 31, 2012, the Company had unamortized share-based compensation expense related to stock options and restricted stock unit awards and performance-based restricted stock units of \$3,653, \$23,116 and \$670, respectively, after estimated forfeitures, which will be recognized over an estimated weighted-average remaining requisite service period of 1.61 years, 2.78 years and 1.40 years, respectively. Share-based compensation cost capitalized as part of inventory was not significant and therefore, not separately disclosed for all periods presented.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**16. Share-Based Compensation (Continued)**

**Stock Option Activity**

The following table summarizes stock option activity for the nine-month period ended December 31, 2012:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at March 31, 2012	3,519	\$6.25		
Granted	—	\$ —		
Exercised	(118)	\$3.36		
Forfeited	(98)	\$9.17		
Outstanding at December 31, 2012	<u>3,303</u>	\$6.27	\$6.43	\$682
Exercisable at December 31, 2012	2,131	\$5.38	\$5.88	\$682
Vested or expected to vest at December 31, 2012	3,168	\$6.22	\$6.39	\$682

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value, based on the Company's closing common stock price of \$3.03 on December 31, 2012, which would have been received by the option holders had all option holders exercised their options and immediately sold their shares on that date. The Company settles employee stock options exercises with newly issued common shares.

	Nine-Month Period Ended December 31, 2012	Fiscal Year Ended	
		March 31, 2012	April 2, 2011
Total intrinsic value of stock options exercised	247	8,914	10,588

No stock options were granted during the nine-month period ended December 31, 2012. The weighted-average estimated fair value per share of stock options granted during the fiscal years ended March 31, 2012 and April 2, 2011, was determined to be \$5.71 and \$2.90, respectively, using the Black-Scholes option-pricing model with the following underlying assumptions:

	Fiscal Year Ended	
	March 31, 2012	April 2, 2011
Weighted average expected volatility	48%	49.5%
Weighted average risk-free interest rate	1.98%	2.4%
Expected dividend yield	—	—
Weighted average expected life (in years)	6.0	6

The Company estimates the expected volatility of its future stock price on that of similar publicly-traded companies, and expects to continue to estimate its expected stock price volatility in this manner until such time as there is adequate historical data to refer to from its own traded share prices. The weighted-average risk free interest rate reflects the rates of U.S. government securities appropriate for the term of the Company's stock options at the time of grant.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**16. Share-Based Compensation (Continued)**

The Company estimated the expected life, which represents the best estimate of the period of time from the grant date that the stock option will remain outstanding, using the simplified method (the mid-point between the time to vest and the contractual terms). The Company applies the simplified method because of insufficient historical exercise data to provide a reasonable basis upon which to estimate expected life due to the limited period of time the equity shares have been publicly traded. For options granted to non-employees the remaining contractual term is used for measurement purposes.

***Restricted Stock Unit Activity***

The following table summarizes restricted stock unit activity for the nine-month period ended December 31, 2012:

	<b>Restricted Stock Units</b>	
	<b>Restricted Stock Units</b>	<b>Weighted Average Grant Date Fair Value</b>
Outstanding at March 31, 2012 .....	3,592	\$8.99
Granted .....	3,277	\$4.79
Vested .....	(1,191)	\$8.21
Forfeited .....	(218)	\$7.64
Outstanding at December 31, 2012 .....	<u>5,460</u>	\$6.69

The total fair value of restricted stock units vested for the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011 was \$5,350, \$10,881 and \$6,011, respectively. The estimated weighted-average grant date fair values of restricted stock units granted during the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011 was \$4.79, \$11.57 and \$7.93, respectively.

***Performance-Based Restricted Stock Unit Activity***

The following table summarizes performance-based restricted stock unit activity for the nine-month period ended December 31, 2012:

	<b>Performance-Based Restricted Stock Units</b>	
	<b>Performance-Based Restricted Stock Units</b>	<b>Weighted Average Grant Date Fair Value</b>
Outstanding at March 31, 2012 .....	487	\$11.97
Granted .....	808	\$ 4.50
Vested .....	—	\$ —
Forfeited .....	—	\$ —
Outstanding at December 31, 2012 .....	<u>1,295</u>	\$ 7.32

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**16. Share-Based Compensation (Continued)**

The estimated weighted-average grant date fair values of performance-based restricted stock units granted during the nine-month period ended December 31, 2012 and fiscal year ended March 31, 2012 was \$4.50 and \$11.97, respectively. No performance-based restricted stock units were granted in fiscal 2011.

Cash received and income tax benefits from stock option exercises and restricted stock unit vesting was \$397 and \$2,106 respectively, for the nine-month period ended December 31, 2012, \$6,901 and \$7,384, respectively, for fiscal year ended March 31, 2012 and \$9,223 and \$5,489, respectively, for the fiscal year ended April 2, 2011.

**17. Earnings (Loss) Per Share**

Basic earnings (loss) per share is computed by dividing the Company's earnings (loss) by only the weighted average number of common shares outstanding during the period. For a period in which the Company reports net income, diluted earnings per share is computed by dividing the Company's earnings by the weighted average number of common shares and, when dilutive, the weighted average number of potential common shares outstanding during the period, as determined using the treasury stock method. Potential common shares consist of common stock issuable upon the exercise of outstanding stock options and the vesting of restricted stock units.

The following table sets forth the computation of the weighted average shares used in computing basic and diluted (loss) earnings per share:

	Nine-Month Period Ended December 31, 2012	Fiscal Year Ended	
		March 31, 2012	April 2, 2011
Weighted average common shares—basic(1) . . . . .	118,776	123,924	138,673
Dilutive common stock options and restricted stock unit awards(2,3,4) . . . . .	—	2,127	2,229
Weighted average common and common equivalent shares—diluted . . . . .	<u>118,776</u>	<u>126,051</u>	<u>140,902</u>

- (1) On November 18, 2011, the Company entered into an agreement to effect an accelerated share repurchase (see Note 15 above for additional information about the Company's accelerated share repurchase program). Under the agreement the Company received a total of 9,438 shares during the period of November 18, 2011 through March 8, 2012. On November 12, 2010, the Company repurchased 26,500 shares of the Company's common stock from GT Solar Holdings, LLC. The impact of these repurchases on the weighted average shares was a reduction of 2,989, and 10,265 for the years ended March 31, 2012 and April 2, 2011, respectively.
- (2) Holders of the Notes may convert the Notes into shares of the Company's common stock, at the applicable conversion rate, subject to certain conditions (Refer to Note 10 for a full description on the Notes). Since it is the Company's intent to settle the principal amount of the Notes in cash, the Company has used the treasury stock method for determining the potential dilution in the diluted earnings per share computation. Since the average price of the Company's common stock

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**17. Earnings (Loss) Per Share (Continued)**

was less than the effective conversion price for such Notes during the reporting periods, the Notes were not dilutive.

- (3) Upon exercise of the Warrants, holders of the Warrants may acquire up to 28,500 shares of the Company's common stock at an exercise price of \$9.9328. If the market price per share of the Company's common stock for the period exceeds the established exercise price, the Warrants will have a dilutive effect on its diluted net income per share using the treasury stock method. Since the average price of the Company's common stock was less than the exercise price of the Warrants for the reporting periods, such Warrants were not dilutive.
- (4) As the Company was in a loss position for the nine-month period ended December 31, 2012, certain shares have not been included in the calculation of earnings per share, as their impact would be anti-dilutive. The total number of shares excluded from the calculation of earnings per share because they would be anti-dilutive was 10,059, 700 and 573 for the nine-month period ended December 31, 2012 and for the fiscal years ended March 31, 2012 and April 2, 2011, respectively.

**18. Segment and Geographical Information**

***Segment Information***

The Company reports its results in three segments: the PV business, the polysilicon business and the sapphire business. The Company's segment presentation has been changed to conform to the method used to report segment information to management. The Company evaluates performance and allocates resources based on revenues and gross margin of each segment. The Company defines segment gross margin as the cost of goods sold associated with segment revenues. Operating expenses are reviewed and evaluated at the consolidated level and are not allocated to the respective operating segments for purposes of allocating resources or evaluating performance of the business segment.

The PV business manufactures and sells directional solidification, or DSS, crystallization furnaces and ancillary equipment used to cast crystalline silicon ingots by melting and cooling polysilicon in a precisely controlled process. These ingots are used to make photovoltaic wafers which are, in turn, used to make solar cells. On August 24, 2011, the Company acquired 100% of the outstanding shares of common stock of privately-held Confluence Solar. Confluence Solar is the developer of HiCz™, a continuously-fed Czochralski growth technology, that is designed to enable the production of high efficiency monocrystalline solar ingots.

The polysilicon business manufactures and sells Silicon Deposition Reactors (SDR™) and related equipment used to produce polysilicon, the key raw material used in silicon-based solar wafers and cells, while also providing engineering services and related equipment.

The sapphire business manufactures and sells advanced sapphire crystal growth systems, as well as sapphire materials used in LED applications, and sapphire components used in other specialty markets.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**18. Segment and Geographical Information (Continued)**

Financial information for the Company's reportable segments is as follows:

	Nine-Month Period Ended December 31, 2012	Fiscal Year Ended	
		March 31, 2012	April 2, 2011
<b>Revenue:</b>			
PV .....	\$ 17,550	\$375,546	\$740,088
Polysilicon .....	306,662	363,278	143,591
Sapphire .....	55,434	216,881	15,305
Total revenue .....	<u>379,646</u>	<u>955,705</u>	<u>898,984</u>
<b>Gross Margin:</b>			
PV .....	\$ (70,563)	\$183,512	\$314,609
Polysilicon .....	121,958	157,420	59,873
Sapphire .....	2,681	85,868	3,513
Total gross margin .....	<u>54,076</u>	<u>426,800</u>	<u>377,995</u>
Research and development .....	55,401	49,872	23,753
Sales and marketing .....	12,408	19,763	19,792
General and administrative .....	44,362	64,117	54,386
Contingent consideration (income) expense .....	(9,492)	4,458	2,262
Impairment of goodwill .....	57,037	—	—
Restructuring charges and asset impairments .....	33,441	—	—
Amortization of intangible assets .....	7,619	8,198	4,500
(Loss) income from operations .....	(146,700)	280,392	273,302
Interest income .....	164	468	603
Interest expense .....	(8,556)	(12,980)	(2,923)
Other, net .....	(950)	2,058	(384)
(Loss) income before taxes .....	<u>\$(156,042)</u>	<u>\$269,938</u>	<u>\$270,598</u>

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**18. Segment and Geographical Information (Continued)**

*Geographic Information*

The following table presents revenue by geographic region, which is based on the destination of the shipments:

	Nine-Month Period Ended	Fiscal Year Ended	
	December 31, 2012	March 31, 2012	April 2, 2011
China .....	\$ 85,842	\$495,283	\$635,789
Korea .....	180,204	238,780	119,346
Other Asia .....	103,330	176,476	80,150
Europe .....	1,460	29,816	51,356
United States .....	6,666	11,490	9,364
Other .....	2,144	3,860	2,979
Total .....	<u>\$379,646</u>	<u>\$955,705</u>	<u>\$898,984</u>

A summary of long-lived assets by geographical region is as follows:

	Nine-Month Period Ended	Fiscal Year Ended	
	December 31, 2012(1)	March 31, 2012(1)	April 2, 2011(1)
United States .....	\$148,769	\$214,778	\$160,005
Luxembourg .....	63,024	69,102	—
China .....	1,382	2,863	1,953
Taiwan .....	121	175	74
Hong Kong .....	1,252	1,573	292
Total .....	<u>\$214,548</u>	<u>\$288,491</u>	<u>\$162,324</u>

- (1) Long-lived assets at December 31, 2012, March 31, 2012 and April 2, 2011, include intangible assets and goodwill of \$136,568, \$188,509 and \$107,883, respectively, all located in the United States, with the exception of \$1,711 and \$61,313 of goodwill and intangibles, respectively, at December 31, 2012, which are located in Luxembourg.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**19. Other, net**

The components of other, net are as follows:

	<u>Nine-Month Period Ended December 31, 2012</u>	<u>Fiscal Year Ended</u>	
		<u>March 31, 2012</u>	<u>April 2, 2011</u>
Offering costs .....	\$ —	\$ —	\$(539)
Foreign currency loss .....	(308)	(478)	(85)
Loss on derivatives—ineffective portion .....	(886)	(1,388)	—
Other .....	244	3,924	240
Total other, net .....	<u>\$(950)</u>	<u>\$ 2,058</u>	<u>\$(384)</u>

During the fiscal year ended March 31, 2012, to account for changes in the fair value of the accelerated share repurchase contract from the trade date of November 18, 2011 to settlement date of November 23, 2011, the Company recorded a gain of \$3,344 to other income to reflect an appreciation of the fair value of the share repurchase contract over the three day settlement period.

During the fiscal year ended April 2, 2011, the Company incurred costs related to public offerings of its common stock. As the Company did not receive proceeds from these offerings, these costs are expensed in the periods incurred. During the fiscal year ended April 2, 2011, the Company was reimbursed approximately \$390 for certain of the expenses incurred in connection with a September 2010 secondary offering of its common stock. As the Company did not receive proceeds from these offerings, costs are expensed in the periods incurred.

**20. Fair Value Measurements**

Fair value is an exit price, representing the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants based on assumptions that market participants would use in pricing an asset or liability. As a basis for classifying such assumptions, a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value, is applied as follows: (Level 1) observable inputs such as quoted prices in active markets for identical assets or liabilities; (Level 2) inputs other than the quoted prices in active markets that are observable either directly or indirectly; and (Level 3) significant unobservable inputs in which there is little or no market data, which requires the Company to develop its own assumptions. This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. There were no transfers between such levels in the nine-month period ended December 31, 2012.



**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**20. Fair Value Measurements (Continued)**

The following table provides the assets and liabilities carried at fair value measured on a recurring basis at December 31, 2012 and March 31, 2012:

	December 31, 2012			
	Total Carrying Value	Fair Value Measurements Using		
		(Level 1)	(Level 2)	(Level 3)
<i>Assets:</i>				
Money market mutual funds—assets . . . . .	\$200,041	\$200,041	\$ —	\$ —
Forward foreign exchange contracts—assets . . . . .	\$ 230	\$ —	\$230	\$ —
<i>Liabilities:</i>				
Forward foreign exchange contracts—liabilities . . . . .	\$ —	\$ —	\$ —	\$ —
Contingent consideration . . . . .	\$ 10,315	\$ —	\$ —	\$10,315
March 31, 2012				
	Total Carrying Value	Fair Value Measurements Using		
		(Level 1)	(Level 2)	(Level 3)
<i>Assets:</i>				
Forward foreign exchange contracts—assets . . . . .	\$ 74	\$—	\$ 74	\$ —
<i>Liabilities:</i>				
Forward foreign exchange contracts—liabilities . . . . .	\$ 637	\$—	\$637	\$ —
Contingent consideration . . . . .	\$22,473	\$—	\$ —	\$22,473

The Company's money market mutual funds are valued using readily available market prices.

The Company's counterparties to its forward foreign exchange contracts are financial institutions. These forward foreign exchange contracts are measured at fair value using a valuation which represents a good faith estimate of the midmarket value of the position, based on estimated bids and offers for the positions, which are updated each reporting period. The Company considers the effect of credit standings in these fair value measurements. There have been no changes in the valuation techniques used to measure the fair value of the Company's forward foreign exchange contracts (see Note 20 below for additional information about the Company's derivatives and hedging activities).

The Company has classified contingent consideration related to its acquisitions within Level 3 of the fair value hierarchy because the fair value is derived using significant unobservable inputs, which include discount rates and probability-weighted cash flows. The Company determined the fair value of its contingent consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the attainment of certain targets. The Company establishes discount rates to be utilized in its valuation models based on the cost to borrow that would be required by a market participant for similar instruments. In determining the probability of attaining certain technical and operation targets, the Company utilizes data regarding similar milestone events from our own experience, while considering the inherent difficulties and uncertainties in developing a product. On a quarterly basis, the Company reassesses the probability factors associated with the financial, operational and technical targets for its contingent consideration obligations.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
**(In thousands, except per share data)**

**20. Fair Value Measurements (Continued)**

Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period.

The key assumptions as of December 31, 2012 related to the contingent consideration from the acquisition of certain assets of Twin Creeks used in the model include: (i) discount rate of 28% for purposes of discounting the low, base and high case scenarios associated with achievement of the revenue based earn-out. The probabilities assigned to this scenario were 45%, 50% and 5% for the low, base and high case scenarios, respectively. An increase or decrease in the probability of achievement of any scenario could result in a significant increase or decrease to the estimated fair value of the contingent consideration liability.

The key assumptions as of December 31, 2012 related to the contingent consideration from the acquisition of Confluence Solar used in the model include: (i) discount rates of 7.04% for the purpose of discounting the expected cash flows; and (ii) probability factors related to the attainment of the financial targets and certain technical targets. The probability used in the analysis for both remaining targets was 50%. An increase or decrease in the probability of achievement of any target could result in a significant increase or decrease to the estimated fair value of the contingent consideration liability.

During the three months ended June 30, 2012, the Company settled its final contingent consideration obligations related to the acquisition of Crystal Systems based on achievement of the final operational target as of March 31, 2012.

Changes in the fair value of the Company's Level 3 contingent consideration obligations during the nine-month period ended December 31, 2012 and the fiscal year ended March 31, 2012 were as follows:

	<b>Nine-Month Period Ended December 31, 2012</b>	<b>Fiscal Year Ended March 31, 2012</b>
Fair value as of the beginning of the period . . . . .	\$22,473	\$11,228
Acquisition date fair value of contingent consideration obligations related to acquisitions . . . . .	5,200	13,858
Changes in the fair value of contingent consideration obligations . . . . .	(9,492)	4,458
Payments of contingent consideration obligations . . . . .	<u>(7,866)</u>	<u>(7,071)</u>
Fair value at the end of the period . . . . .	<u>\$10,315</u>	<u>\$22,473</u>

The carrying amounts reflected in the Company's consolidated balance sheets for cash, accounts receivable, prepaid expenses and other current assets, accounts payable, accrued expenses and customer deposits approximate fair value due to their short-term maturities. The Company did not hold any short-term investments at December 31, 2012 or March 31, 2012. The carrying value of long-term debt at December 31, 2012 and March 31, 2012 approximates its fair value.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**20. Fair Value Measurements (Continued)**

The following table provides the carrying and fair values of our long-term debt obligations as of December 31, 2012 and March 31, 2012:

Description	Total Carrying Value	Fair Value Measurements Using			Fair Value
		(Level 1)	(Level 2)	(Level 3)	
<b>2012 Term Facility, including current portion</b>					
December 31, 2012 . . . . .	\$139,563	\$ —	\$139,563	\$—	\$139,563
March 31, 2012 . . . . .	\$ 75,000	\$ —	\$ 75,000	\$—	\$ 75,000
<b>3.00% Senior Convertible Notes</b>					
December 31, 2012 . . . . .	\$157,440	\$ —	\$157,300	\$—	\$157,300
March 31, 2012 . . . . .	\$ —	\$ —	\$ —	\$—	\$ —

Certain assets have been measured at fair value on a nonrecurring basis using significant unobservable inputs (Level 3). The following table presents nonrecurring fair value measurements recognized for the nine-month period ended December 31, 2012. There were no nonrecurring fair value measurements recognized during the fiscal year ended March 31, 2012.

	Fair Value	Total Losses
Goodwill allocated to the PV reporting unit . . . . .	\$3,378	\$(57,037)
Long-lived asset group of the Hazelwood facility . . . . .	\$5,165	\$ 29,261

For Level 3 assets that were measured at fair value on a non-recurring basis during the nine-month period ended December 31, 2012, the following table presents the fair value of those assets as of the measurements date, valuation techniques and related unobservable inputs of those assets:

	Fair Value	Valuation Technique(s)	Unobservable Input	Range, Median or Average
Long-lived asset group of the Hazelwood facility	\$5,165	Cost Approach and Market Approach	Depreciation factors	Average of 75%

Refer to Note 4, *Goodwill and Intangible Assets*, for further discussion on the fair value of the PV reporting units goodwill.

The fair value of the long-lived asset group of the Hazelwood facility was calculated based on a probability assessment of potential outcomes. An estimation of fair value, assuming the assets would be used by a market participant as is, was determined using a cost approach which was based on current replacement and/or reproduction costs of the asset as new, less depreciation factors attributable to physical, functional and economic obsolescence and utilizing data from various indexes. A separate estimate of fair value was determined using a market approach assuming an orderly liquidation. Equal weighting was applied to each scenario.

Significant changes in any of the significant unobservable inputs used could result in significantly higher or lower fair value measurements.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**21. Derivative and Hedging Activities**

The Company enters into forward foreign currency exchange contracts to hedge portions of foreign currency denominated inventory purchases. These contracts typically expire within 12 months of entering into the contract. As of December 31, 2012, the Company had foreign currency exchange contracts with notional amounts of €5,531, or \$7,073, all of which qualified as cash flow hedges.

The following table summarizes activity in accumulated other comprehensive income (loss) related to derivatives classified as cash flow hedges held by the Company during the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011:

	Nine-Month Period Ended	Fiscal Year Ended	
	December 31, 2012	March 31, 2012	April 2, 2011
Balance at beginning of period . . . . .	\$(1,378)	\$(3,522)	\$(5,264)
Net gain on changes in fair value of derivatives, net of tax effect of \$(563), \$(1,429) and \$(1,234), respectively .	842	2,144	1,742
Balance at end of period . . . . .	<u>\$ (536)</u>	<u>\$(1,378)</u>	<u>\$(3,522)</u>

During the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, the Company recognized (losses) gains of \$(2,354), \$(4,258) and \$(2,992), respectively, against cost of revenue with respect to cash flow hedges where the underlying hedged transaction had affected earnings. Approximately \$40 of accumulated gain is expected to be reclassified into earnings over the next twelve months.

During the nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011, \$886, \$1,388 and \$0, respectively, was recognized as expense on certain forward foreign currency exchange contracts that no longer qualified as cash flow hedges.

The following table sets forth the balance sheet location and fair value of the Company's forward foreign exchange contracts, all of which were designated as hedging instruments at December 31, 2012 and March 31, 2012:

	Balance Sheet Location	December 31, 2012 Fair Value	March 31, 2012 Fair Value
<i>Instruments Designated as Cash Flow Hedges</i>			
Forward foreign currency exchange contracts— assets . . . . .	Other current assets	\$230	\$ 74
Forward foreign currency exchange contracts— liabilities . . . . .	Accrued expenses	\$ —	\$637

The following table sets forth the effect of the Company's forward foreign currency exchange contracts designated as hedging instruments on the consolidated statements of operations for the

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**21. Derivative and Hedging Activities (Continued)**

nine-month period ended December 31, 2012 and the fiscal years ended March 31, 2012 and April 2, 2011:

*Instruments Designated as Cash Flow Hedges*

Fiscal Years Ended	Amount of (Gain) or Loss Recognized in OCI on Derivative (Effective Portion)	Location of Gain or (Loss) Reclassified from AOCI into Income (Effective Portion)	Amount of Gain or (Loss) Reclassified from AOCI into Income (Effective Portion)	Location of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)	Amount of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)
December 31, 2012 . . . . .	\$1,835	Cost of revenue	\$(2,354)	Other, net	\$ (886)
March 31, 2012 . . . . .	\$2,074	Cost of revenue / Research and Development	\$(4,258)	Other, net	\$(1,388)
April 2, 2011 . . . . .	\$ 16	Cost of revenue	\$(2,992)	Other, net	\$ —

The interest component of forward foreign exchange contracts that does not qualify for hedge accounting treatment has been expensed and is not significant.

**22. Quarterly Financial Information (unaudited)**

Unaudited financial results by quarter for the nine-month period ended December 31, 2012 and the fiscal year ended March 31, 2012 are summarized below. The Company's quarterly reporting includes 13 week periods, unless otherwise noted.

	Quarterly Period Ended			Total
	June 30, 2012	September 29, 2012	December 31, 2012	
<u>Nine-month period ended December 31, 2012</u>				
Revenue . . . . .	\$167,252	\$110,061	\$ 102,333(1)	\$ 379,646
Gross profit . . . . .	60,206	35,028	(41,158)(2)	54,076
Net income (loss) . . . . .	14,757	2,344	(159,409)(2)(3)	(142,308)
Income per common share (basic) . . . . .	0.12	0.02	(1.34)	(1.20)
Income per common share (diluted) . . . . .	0.12	0.02	(1.34)	(1.20)

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**22. Quarterly Financial Information (unaudited) (Continued)**

<u>Fiscal year ended March 31, 2012</u>	<u>Quarterly Period Ended</u>				<u>Total</u>
	<u>July 2, 2011</u>	<u>October 1, 2011</u>	<u>December 31, 2011</u>	<u>March 31, 2012</u>	
Revenue . . . . .	\$231,096	\$217,691	\$153,028	\$353,890(1)	\$955,705
Gross profit . . . . .	113,389	95,085	65,998	152,328	426,800
Net income . . . . .	52,069	36,915	15,340	79,073	183,397
Income per common share (basic)(4) . . . . .	0.41	0.29	0.12	0.66	1.48
Income per common share (diluted)(4) . . . . .	0.41	0.29	0.12	0.65	1.45

From time to time, operating results are significantly affected by adjustments or transactions within the quarter. The following items have affected the operating results during the periods presented:

- (1) During the nine-month period ended December 31, 2012, the Company recorded revenue from terminated contracts as follows: first quarter-\$5,638; second quarter-\$2,900. During the fiscal year ended March 31, 2012, the Company recorded revenue from terminated contracts as follows: second quarter—\$29,066; fourth quarter—\$6,453.
- (2) During the three-month period ended December 31, 2012, the Company incurred charges of \$60,192 to record PV inventory to net realizable value. Additionally the Company recorded charges in connection with the write-off of \$8,352 of all remaining PV vendor advances. See Note 6, *Inventories*.
- (3) During the three-month period ended December 31, 2012, the Company recorded charges of \$57,037 in connection with the impairment of PV goodwill and \$33,441 of charges related to the October 2012 restructuring, Hazelwood facility idling and related asset impairments. For more information regarding goodwill impairment and restructuring charges, please refer to Note 4 *Goodwill and Other Intangibles* and Note 11 *Restructuring Charges and Asset Impairments*, respectively.
- (4) On November 18, 2011, the Company entered into an agreement to effect an accelerated share repurchase (see Note 15 above for additional information about the Company's accelerated share repurchase program). Under the agreement the Company received a total of 9,438 shares during the period of November 18, 2011 through March 8, 2012. The impact of this repurchase on the weighted average shares was a reduction of 2,989 for the fiscal year ended March 31, 2012.

**GT Advanced Technologies Inc.**  
**Notes to Consolidated Financial Statements (Continued)**  
(In thousands, except per share data)

**23. Transition Period Comparative Financial Data (unaudited)**

In April 2012, the Company changed its fiscal year end from the Saturday closest to March 31 to December 31. As a result, the Company provides certain comparable financial information for the nine-month periods ended December 31, 2012 and December 31, 2011 as follows:

	<u>Nine-Month Period Ending</u>	
	<u>December 31,</u> <u>2012</u>	<u>December 31,</u> <u>2011</u>
<b>Consolidated Statements of Operations Data:</b>		
Revenue . . . . .	\$ 379,646	\$ 601,815
Cost of revenue . . . . .	<u>325,570</u>	<u>327,343</u>
Gross profit . . . . .	54,076	274,472
Total operating expenses . . . . .	200,776	110,210
(Loss) income before taxes . . . . .	(156,042)	154,642
(Benefit) provision for income taxes . . . . .	(13,734)	50,318
Net (loss) income . . . . .	\$(142,308)	\$ 104,324
Net (loss) income per share data:		
Basic . . . . .	\$ (1.20)	\$ 0.83
Diluted . . . . .	\$ (1.20)	\$ 0.82
Weighted-average number of shares used in per share calculations:		
Basic . . . . .	118,776	125,430
Diluted . . . . .	118,776	127,646
<b>Consolidated Statements of Cash Flows Data:</b>		
Net cash (used in) provided by operating activities . . . . .	\$(151,478)	\$ 131,322
Net cash (used in) provided by investing activities . . . . .	(35,176)	(94,046)
Net cash provided by (used in) financing activities . . . . .	253,778	(193,323)
Effects of foreign exchange rates on cash . . . . .	<u>68</u>	<u>176</u>
Net increase (decrease) in cash and cash equivalents: . . . . .	67,192	(155,871)
Cash and cash equivalents at beginning of period . . . . .	<u>350,903</u>	<u>362,749</u>
Cash and cash equivalents at end of period . . . . .	<u>\$ 418,095</u>	<u>\$ 206,878</u>

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of GT Advanced Technologies Inc.  
Nashua, New Hampshire

We have audited the accompanying consolidated balance sheets of GT Advanced Technologies Inc. and subsidiaries (the “Company”) as of December 31, 2012 and March 31, 2012, and the related consolidated statements of operations, comprehensive (loss) income, stockholders’ equity, and cash flows for the nine-month period ended December 31, 2012 and for the fiscal years ended March 31, 2012 and April 2, 2011. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of GT Advanced Technologies Inc. and subsidiaries as of December 31, 2012 and March 31, 2012, and the results of their operations and their cash flows for the nine-month period ended December 31, 2012 and for the fiscal years ended March 31, 2012 and April 2, 2011, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the consolidated financial statements, the Company changed its fiscal year end from the Saturday closest to March 31 to December 31.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company’s internal control over financial reporting as of December 31, 2012, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2013 expressed an unqualified opinion on the Company’s internal control over financial reporting.

/s/ Deloitte & Touche LLP

Boston, Massachusetts  
March 1, 2013



## **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

### **Item 9A. Controls and Procedures**

The certifications of our principal executive officer and principal financial officer required in accordance with Rule 13a-14(a) under the Exchange Act and Section 302 of the Sarbanes-Oxley Act of 2002 are attached as exhibits to this Transition Report on Form 10-K. The disclosures set forth in this Item 9A contain information concerning the evaluation of our disclosure controls and procedures, and changes in internal control over financial reporting, referred to in paragraph 4 of the certifications. Those certifications should be read in conjunction with this Item 9A for a more complete understanding of the matters covered by the certifications. This section also includes Management's Report on Internal Control over Financial Reporting.

### **Disclosure Controls and Procedures**

*Evaluation of Disclosure Controls and Procedures.* Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), as of December 31, 2012.

Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to the Company's management, including the principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, as of December 31, 2012, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, these disclosure controls and procedures are effective at the reasonable assurance level and designed to ensure that the information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the requisite time periods.

### **Management's Report on Internal Control over Financial Reporting**

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. A company's internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officers, or persons performing similar functions, and effected by the Company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that:

- (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
- (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting

principles, and that receipts and expenditures of the Company are being made in accordance with authorizations of management and directors of the company; and

- (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, however, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2012. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control—Integrated Framework*.

Based on this assessment, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has concluded that, as of December 31, 2012, our internal control over financial reporting was effective based on those criteria at the reasonable assurance level.

Our independent registered public accounting firm has issued an attestation report on our internal control over financial reporting. This report appears below.

#### **Changes in Internal Control over Financial Reporting**

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended December 31, 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of  
GT Advanced Technologies Inc.  
Nashua, New Hampshire

We have audited the internal control over financial reporting of GT Advanced Technologies Inc. and subsidiaries (the "Company") as of December 31, 2012, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the nine-month period ended December 31, 2012 of the Company and our report dated March 1, 2013 expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the change in fiscal year end from the Saturday closest to March 31 to December 31.

/s/ Deloitte & Touche LLP

Boston, Massachusetts  
March 1, 2013

### **Item 9B. Other Information**

The Company discloses the following pursuant to Item 2.06 of Current Report on Form 8-K;

On February 28, 2013, the Company concluded that it had incurred material charges as follows:

During December 2012, the Company took a number of strategic actions, including, (i) intending to discontinue any significant future investments in the DSS product line and (ii) determining that the vast majority of the amounts in the Company's backlog attributable to DSS equipment is at risk of not converting into revenue and, accordingly, future sales of DSS will be limited. The Company has taken or plans to take a number of strategic actions, including shifting focus from acquiring other companies and technology to engaging in joint development and licensing arrangements; and idling the Company's HiCz Hazelwood facility in St. Louis and shifting that research and development to Merrimack, New Hampshire. These factors triggered impairment assessments that resulted in impairment charges in December 2012 of \$60.2 million related to PV inventory, \$8.4 million related to all remaining PV vendor advances, \$57.0 million related to PV goodwill, and \$29.3 million related to certain long-lived, intangible and other assets located at our HiCz Hazelwood facility. Refer to Notes 4, *Goodwill and Intangible Assets*, 6, *Inventories*, and 11, *Restructuring Charges and Asset Impairments*, for further details.

In addition, as part of a program to reduce costs and increase operational efficiencies, we announced, on October 31, 2012, a plan to streamline worldwide operations to better align our cost structure with current market conditions by reducing our global workforce and closing or consolidating certain facilities. In connection with this program, we recorded \$3.7 million of restructuring and asset impairment expense during the quarter ended December 31, 2012, including \$2.5 million of severance and related benefits to reduce the workforce. The Company also recorded \$1.0 million for the write-down of assets associated with facility consolidations. Refer to Notes 4, *Goodwill and Intangible Assets*, 6, *Inventories*, and 11, *Restructuring Charges and Asset Impairments*, for further details.

## **PART III**

### **Item 10. Directors, Executive Officers and Corporate Governance**

Information required by this Item relating to our directors and nominees is contained in our definitive proxy statement for our 2013 Annual Meeting of Stockholders scheduled to be held June 15, 2013, which will be filed within 120 days of the end of our fiscal year ended December 31, 2012, or the 2013 Proxy Statement, under the caption "Proposal 1—Election of Directors—Certain Information Regarding Directors" and is incorporated herein by reference. Information required by this item relating to our executive officers is contained in our 2013 Proxy Statement under the caption "Executive Officers" and is incorporated herein by reference. Information required by this item relating to compliance with Section 16(a) of the Securities Exchange Act of 1934 is contained in our 2013 Proxy Statement under the caption "Other Information—Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated herein by reference. The remaining information called for by this item is contained in our 2013 Proxy Statement under the caption "Corporate Governance" and is incorporated herein by reference.

We have adopted a code of ethics that applies to our principal executive, financial and accounting officers and all persons performing similar functions. The code of ethics is published on the Company's website ([www.gtat.com](http://www.gtat.com)) under the Corporate Governance section of the Investor Relations page. A printed copy of this code may be obtained, without charge, by writing to the Secretary, GT Advanced Technologies Inc., 20 Trafalger Square, Nashua, New Hampshire 03063. If we waive any material provisions of our code of ethics or substantively change the code, we will disclose that fact on our website.

**Item 11. Executive Compensation**

Information required by this Item is contained in our 2013 Proxy Statement under the captions “Executive Compensation,” and “Director Compensation,” and “Corporate Governance—Committees of the Board of Directors” and “Corporate Governance—Compensation Committee Interlocks and Inside Participation” and is incorporated herein by reference.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

**Equity Compensation Plans**

The following table sets forth certain information, as of December 31, 2012, concerning securities authorized for issuance under all of our equity compensation plans (amounts in thousands, except per share data):

<u>Plan Category</u>	<u>Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights(a)</u>	<u>Weighted-Average Exercise Price of Outstanding Options and Rights(b)(4)</u>	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))(c)</u>
Equity compensation plans approved by our stockholders:			
2011 Equity Incentive Plan . . . . .	4,220(1)	\$11.03	8,447
2008 Equity Incentive Plan . . . . .	5,009(2)	\$ 7.24	—
Equity compensation plans not approved by our stockholders:			
2006 Stock Option Plan(3) . . . . .	829	\$ 3.25	—
<b>Total</b> . . . . .	<b>10,058</b>	<b>\$ 6.27</b>	<b>8,447</b>

(1) Includes 4,195 restricted stock units under our 2011 Equity Incentive Plan.

(2) Includes 2,560 restricted stock units under our 2008 Equity Incentive Plan.

(3) Includes options granted under the Second Amended and Restated GT Solar International, Inc. 2006 Stock Option Plan (the “2006 Plan”). In connection with the reorganization of our holding company structure in September 2006, options to purchase GT Solar Incorporated’s common stock were converted into options to purchase shares of our common stock. In July 2006, we granted options to executives, employees, directors and consultants under the 2006 Plan. Following the reorganization of our holding company structure in September 2006, these options were for an aggregate of approximately 3,329 shares of our common stock. Of these option grants, options with respect to approximately 2,913 shares vest as follows: one quarter of the options vested on the first anniversary of the grant date, and 1/48 of the options vest at the end of each month during the subsequent three years; and options with respect to 416,160 shares vest as follows: one third of the options vested on the first anniversary of the grant date, and 1/36 of the options vest at the end of each month during the subsequent two years. In December 2007 and January 2008, we granted options to purchase an aggregate of approximately 3,609 shares of our common stock to executives, employees, directors and consultants. One quarter of the options vested on the first anniversary of the grant date, and 1/48 of the options vest at the end of each month during the subsequent three years. Any unexercised option under the 2006 Plan shall immediately expire upon the first to occur of: (i) the tenth anniversary of the grant date; or (ii) subject to the provisions of the relevant option agreement and except as otherwise determined by the compensation committee, termination of the option holder’s service to us or one of our subsidiaries. See Note 16 to our consolidated

financial statements in Item 8 in this Transition Report on Form 10-K for additional information on the 2006 Plan. In June 2008, our Board of Directors terminated the ability to grant future stock option awards under the 2006 Plan.

- (4) The weighted average exercise price does not take into account the shares issuable upon vesting of outstanding restricted stock units which have no exercise price.

Information required by this item relating to security ownership of certain beneficial owners and management is contained in our 2013 Proxy Statement under the caption “Beneficial Stock Ownership of Directors, Executive Officers and Persons Owning More Than Five Percent of Common Stock.”

**Item 13. *Certain Relationships and Related Transactions, and Director Independence***

Information required by this item relating to transactions with related persons is contained in our 2013 Proxy Statement under the caption “Transactions with Related Persons” and is incorporated herein by reference. Information required by this item relating to director independence is contained in our 2013 Proxy Statement under the caption “Corporate Governance—Board Composition” and is incorporated herein by reference.

**Item 14. *Principal Accountant Fees and Services***

Information required by this item is contained in our 2013 Proxy Statement under the caption “Audit Committee Matters—Principal Accountant Services and Fees” and is incorporated herein by reference.

**PART IV**

**Item 15. *Exhibits and Financial Statement Schedules***

- (a)(1) *Financial Statements.* See “Index to Financial Statements” under Item 8 of this Form 10-K.
- (a)(2) *Financial Statement Schedules.* Financial statement schedules have been omitted since they are either not required, not applicable or the information is otherwise included.
- (a)(3) *Exhibits.* The exhibit filed as part of this Transition Report on form 10-K are listed in the Exhibit Index immediately preceding such exhibits and are incorporated by reference or are filled with this report as indicated below (numbered in accordance with Item 601 of Regulation S-K).



<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ MARY PETROVICH</u> Mary Petrovich	Director	March 1, 2013
<u>/s/ ROBERT E. SWITZ</u> Robert E. Switz	Director	March 1, 2013
<u>/s/ NOEL G. WATSON</u> Noel G. Watson	Director	March 1, 2013
<u>/s/ THOMAS WROE, JR.</u> Thomas Wroe, Jr.		March 1, 2013



## Exhibit Index

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
1.1	Underwriting Agreement, dated September 24, 2012, between the Company and the Underwriters.	8-K	9/28/2012	1.1	
2.1	Agreement and Plan of Merger, dated December 8, 2005, by and among GT Solar Incorporated (formerly known as GT Equipment Technologies, Inc.), GT Solar Holdings, LLC, Glow Merger Corporation, OCM/GFI Power Opportunities Fund II, L.P. and OCM/GFI Power Opportunities Fund II (Cayman), L.P., and the stockholders party thereto.	S-1/A	6/6/2008	2.1	
2.2	Agreement and Plan of Merger, dated as of September 28, 2006, by and among, GT Solar Incorporated, GT Solar International, Inc. and GT Solar Merger Corp.	S-1/A	6/6/2008	2.2	
3.1(i)	Amended and Restated Certificate of Incorporation of the Registrant.	10-Q	8/27/2008	3.1	
3.1(ii)	Certificate of Ownership and Merger of GT Advanced Technologies, Inc. into GT Solar International, Inc. dated August 1, 2011.	8-K	8/8/2011	1.1	
3.2	Amended and Restated By-laws of the Registrant.	8-K	4/20/2012	3.2	
4.1	Specimen Common Stock certificate.	S-1/A	7/18/2008	4.1	
4.2	Indenture, dated September 28, 2012, between the Company and U.S. Bank National Association, as Trustee.	8-K	9/28/2012	4.1	
4.3	Amended and Restated GT Solar International, Inc. Employee Stockholders Agreement, dated as of July 1, 2008, by and among GT Solar International, Inc., GT Solar Holdings, LLC and each individual who executes a counterpart to the agreement as well as any other person who acquires shares of GT Solar International, Inc.'s common stock pursuant to the Second Amended and Restated GT Solar International, Inc. 2006 Stock Option Plan.	S-1/A	7/7/2008	4.4	
4.4	First Supplemental Indenture, dated September 28, 2012 between the Company and U.S. Bank National Association, as Trustee (including a form of 3.00% Convertible Senior Note due 2017).	8-K	9/28/2012	4.2	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
5.1*	Opinion of Ropes & Gray LLP dated September 28, 2012.	8-K	9/28/2012	5.1	
10.1*	Employment Agreement, dated as of April 12, 2006, and as amended on January 16, 2007, by and between GT Solar Incorporated and David W. Keck.	S-1	4/26/2007	10.6	
10.2*	Employment Agreement, dated as of June 1, 2006, by and between GT Solar Incorporated and Jeffrey J. Ford.	S-1	4/26/2007	10.7	
10.3*	Second Amended and Restated GT Solar International, Inc. 2006 Stock Option Plan, dated December 30, 2005, and amended July 7, 2006 and January 15, 2008.	S-1/A	4/18/2008	10.9	
10.4	Confidentiality and Non-Competition Agreement, dated as of April 17, 2006, by and between GT Solar Incorporated and David W. Keck.	S-1/A	4/18/2008	10.13	
10.5	Confidentiality and Non-Competition Agreement, dated as of June 1, 2006, by and between GT Solar Incorporated and Jeffrey J. Ford.	S-1/A	4/18/2008	10.14	
10.6	Form of Director Confidentiality Agreement.	S-1/A	7/18/2008	10.17	
10.7+	Engineering Agreement, dated as of March 14, 2006, by and between GT Solar Incorporated and Poly Engineering, S.r.l.	S-1/A	4/18/2008	10.18	
10.8*	Amendment to Employment Agreement, dated January 16, 2007, by and between GT Solar Incorporated and David W. Keck.	S-1/A	4/18/2008	10.19	
10.9*	Form of Stock Option Agreement under the GT Solar International, Inc. 2006 Stock Option Plan, as amended.	S-1/A	4/18/2008	10.25	
10.10*	Letter Agreement, dated August 8, 2006, by and between the Registrant and Ernest L. Godshalk.	S-1/A	6/6/2008	10.28	
10.11*	Letter Agreement, dated April 4, 2007, by and between the Registrant and Ernest L. Godshalk.	S-1/A	6/6/2008	10.29	
10.12*	Letter Agreement, dated May 9, 2008, by and between the Registrant and J. Michal Conaway.	S-1/A	6/6/2008	10.30	
10.13*	Form of July 2006 Stock Option Agreement under the GT Solar International, Inc. 2006 Stock Option Plan, as amended.	S-1/A	7/7/2008	10.36	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
10.14	Amended and Restated Registration Rights Agreement, dated as of July 1, 2008, among the Registrant and the persons on the signature page thereto.	S-1/A	7/7/2008	10.40	
10.15*	Form of Director Restricted Stock Unit Agreement.	S-1/A	7/18/2008	10.41	
10.16*	Form of Director Proprietary Rights and Confidentiality Agreement.	S-1/A	7/18/2008	10.42	
10.17*	Letter Agreement, dated September 11, 2008, by and between the Company and Matthew E. Massengill.	8-K	9/18/2008	10.1	
10.18*	2008 Equity Incentive Plan.	10-Q	11/7/2008	10.1	
10.19*	Letter Agreement, dated November 10, 2008, by and between the Registrant and Noel G. Watson.	8-K	11/12/2008	10.1	
10.20	Confidentiality Agreement, dated as of November 11, 2008, by and between the Registrant and Noel G. Watson	8-K	12/3/2008	10.1	
10.21*	Restricted Stock Unit Agreement, dated as of September 12, 2008, by and between the Registrant and Matthew E. Massengill.	10-Q	2/6/2009	10.4	
10.22*	Restricted Stock Unit Agreement, dated as of November 11, 2008, by and between the Registrant and Noel G. Watson.	10-Q	2/6/2009	10.5	
10.23*	Form of Restricted Stock Unit Agreement for employees.	10-Q	2/6/2009	10.6	
10.24*	Form of Restricted Stock Unit Agreement for executive officers.	10-Q	2/6/2009	10.7	
10.25*	Employment Agreement Amendment for Code Section 409A, by and between the Registrant and David W. Keck.	10-K	6/9/2009	10.52	
10.26*	Employment Agreement Amendment for Code Section 409A, by and between the Registrant and Jeffrey J. Ford.	10-K	6/9/2009	10.53	
10.27*	Amendment to Employment Agreement, dated as of June 4, 2009, by and between the Registrant and David W. Keck.	10-K	6/9/2009	10.55	
10.28*	Employment Agreement, dated as of January 19, 2009, by and between the Registrant and David Gray.	10-K	6/9/2009	10.56	
10.29*	Section 162(m) Performance Incentive Plan.	8-K	8/12/2009	10.2	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
10.30*	Employment Agreement with Thomas Gutierrez dated October 28, 2009.	8-K	11/2/2009	10.1	
10.31*	Restricted Stock Unit Agreement with Thomas Gutierrez dated October 29, 2009.	8-K	11/2/2009	10.2	
10.32*	Stock Option Grant Agreement with Thomas Gutierrez dated October 29, 2009.	8-K	11/2/2009	10.3	
10.33*	Form of restricted stock unit agreement for executive officers.	10-Q	11/10/2009	10.4	
10.34*	Form of stock option agreement for executive officers.	10-Q	11/10/2009	10.5	
10.35*	Form of restricted stock unit agreement for directors.	10-Q	11/10/2009	10.6	
10.36*	Employment Agreement, dated as of February 23, 2010, by and between the Company and Richard Gaynor.	8-K	3/1/2010	10.1	
10.37*	Offer Letter, dated as of February 1, 2010, by and between the Registrant and Richard Gaynor.	8-K	3/1/2010	10.2	
10.38*	Form of Indemnification Agreement for non-employee directors.	8-K	4/20/2010	10.1	
10.39*	Form of Indemnification Agreement for executive officers.	8-K	6/8/2010	10.1	
10.40	Share Repurchase Agreement, dated as of November 5, 2010, by and among GT Solar International, Inc. and GT Solar Holdings, LLC.	8-K	11/9/2010	10.1	
10.41*	Letter Agreement, dated May 25, 2011, by and between the Company and Mary Petrovich.	8-K	06/01/2011	10.1	
10.42*	Letter Agreement, dated May 25, 2011, by and between the Company and Robert E. Switz.	8-K	06/01/2011	10.2	
10.43*	Form of Restricted Stock Unit Agreement for Non-Employee Directors.	8-K	06/01/2011	10.3	
10.44*	Offer letter, dated as of May 9, 2011, by and between the Company and John R. Granara, III.	8-K	06/01/2011	10.4	
10.45	Form of Performance-Based Restricted Stock Unit Agreement for executive officers.	10-Q	08/05/2011	10.1	
10.46	GT Advanced Technologies, Inc. 2011 Equity Incentive Plan.	8-K	08/30/2011	10.1	
10.47	Settlement Agreement dated as of September 27, 2011.	8-K	10/03/2011	10.1	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
10.48	Credit Agreement dated as of January 31, 2012 among GTAT Corporation, GT Advanced Technologies Limited, GT Advanced Technologies and Bank of America, N.A. and the other lenders party thereto.	8-K	02/03/2012	10.1	
10.49	Confirmation Agreement between GT Advanced Technologies, Inc. and UBS, AG, London Branch dated November 18, 2011.	10-Q	02/07/2012	10.1	
10.50*	Form of Restricted Stock Unit Agreement for Directors.	10-Q	02/07/2012	10.2	
10.51*	Letter Agreement, dated March 12, 2012 between the Company and Kathleen A. Cote.	8-K	03/23/2012	10.1	
10.52*	Form of Restricted Stock Unit Agreement for Non-Employee Directors.	8-K	03/23/2012	99.1	
10.53	Form of Performance Stock Unit Agreement for Chief Executive Officer.	8-K	6/12/2012	10.1	
10.54	Form of Performance Stock Unit Agreement for Executive Officers (other than Chief Executive Officer).	8-K	6/12/2012	10.2	
10.55	Form of Time-Based Restricted Stock Unit Agreement for Executive Officers.	8-K	6/12/2012	10.3	
10.56	Joinder to the Credit Agreement by and between the Company, the U.S. Borrower, the Hong Kong Borrower, the lenders party thereto and Bank of America, as administrative agent, dated as of June 15, 2012.	8-K	6/21/2012	10.1	
10.57	Incremental Joinder Supplement No. 1 by and between the Company, the U.S. Borrower, the Hong Kong Borrower, the lenders party thereto and Bank of America, as administrative agent, dated as of June 18, 2012.	8-K	6/21/2012	10.2	
10.58	Incremental Joinder Supplement No. 2 by and between the Company, the U.S. Borrower, the Hong Kong Borrower, the lenders party thereto and Bank of America, as administrative agent, dated as of June 21, 2012.	8-K	6/21/2012	10.3	
10.59	Incremental Joinder Supplement No. 3 by and between the Company, the U.S. Borrower, the Hong Kong Borrower, the lenders party thereto and Bank of America, as administrative agent, dated as of June 25, 2012.	10-Q	6/29/2012	10.1	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
10.60	Form of Indemnity Agreement for Non-Employee Directors.	10-Q	8/7/2012	10.8	
10.61	Base Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and UBS AG.	8-K	9/28/2012	10.1	
10.62	Base Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and Morgan Stanley & Co. International plc.	8-K	9/28/2012	10.2	
10.63	Base Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and Credit Suisse International.	8-K	9/28/2012	10.3	
10.64	Base Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and Bank of America N.A.	8-K	9/28/2012	10.4	
10.65	Additional Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and UBS AG.	8-K	9/28/2012	10.5	
10.66	Additional Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and Morgan Stanley & Co. International plc.	8-K	9/28/2012	10.6	
10.67	Additional Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and Credit Suisse International.	8-K	9/28/2012	10.7	
10.68	Additional Convertible Bond Hedge Transaction Confirmation, dated September 25, 2012, between the Company and Bank of America N.A.	8-K	9/28/2012	10.8	
10.69	Base Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and UBS AG.	8-K	9/28/2012	10.9	
10.70	Base Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and Morgan Stanley & Co. International plc.	8-K	9/28/2012	10.1	
10.71	Base Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and Credit Suisse International.	8-K	9/28/2012	10.11	
10.72	Base Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and Bank of America N.A.	8-K	9/28/2012	10.12	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
10.73	Additional Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and UBS AG.	8-K	9/28/2012	10.13	
10.74	Additional Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and Morgan Stanley & Co. International plc.	8-K	9/28/2012	10.14	
10.75	Additional Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and Credit Suisse International.	8-K	9/28/2012	10.15	
10.76	Additional Issuer Warrant Transaction Confirmation, dated September 25, 2012, between the Company and Bank of America N.A.	8-K	9/28/2012	10.16	
10.77	Amendment No. 1 to Credit Agreement, dated as of January 31, 2012, by and among the Company, its U.S. operating subsidiary (as U.S. Borrower), its Hong Kong subsidiary (as Hong Kong Borrower), each lender from time to time party thereto and Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer.	8-K	9/28/2012	10.17	
10.78	Letter Agreement, dated as of October 12, 2012, by and between GTAT Corporation and David Keck.	8-K	10/18/2012	10.1	
10.79	Consulting Agreement, dated as of October 12, 2012, by and between GTAT Corporation and David Keck.	8-K	10/18/2012	10.2	
10.80	Employment Agreement, dated as of June 18, 2012, by and between GT Advanced Technologies Inc. and Dan Squiller.	10-Q	11/7/2012	10.20	
10.81	International Assignment Letter, dated as of December 21, 2012, by and between GTAT Corporation and David Keck.	8-K	1/4/2013	10.1	
10.82	Agreement, dated as of December 31, 2012, by and between GT Advanced Technologies Inc. and Tom Gutierrez.	8-K	1/4/2013	10.2	
10.83	Form of Performance Stock Unit Agreement for Executive Officers Approved on January 14, 2013.	8-K	1/18/2013	10.1	
10.84	Form of Time-Based Restricted Stock Unit Agreement for Executive Officers Approved on January 14, 2013.	8-K	1/18/2013	10.2	

Exhibit Number	Description of Document	Incorporated by Reference			Filed Herewith
		Form	Date Filed	Exhibit #	
10.85	Letter Agreement, dated February 4, 2013, by and between the Company and Thomas Wroe, Jr.	8-K	2/6/2013	10.1	
10.86	Amendment No. 2 to the Credit Agreement dated as of January 31, 2012, as amended by Amendment No. 1 dated September 28, 2012 by and among the Company, its U.S. operating subsidiary (as U.S. Borrower), its Hong Kong subsidiary (as Hong Kong Borrower), each lender from time to time party thereto and Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer dated February 27, 2013.				X
18.1	Preferability letter.				X
21.1	Subsidiaries of the Registrant.				X
23.1	Consent of Deloitte & Touche LLP.				X
31.1	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, Rule 13a-14(a)/15d-14(a), by Chief Executive Officer.				X
31.2	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, Rule 13a-14(a)/15d-14(a), by Chief Financial Officer.				X
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Executive Officer and Chief Financial Officer.				X
101.1	The following materials from GT Advanced Technology Inc. Transition Report on Form 10-K for the year ended December 31, 2012 formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Equity, (iv) Consolidated Statements of Comprehensive Income (Loss), (v) Consolidated Statements of Cash Flows and (vi) Notes to Consolidated Financial Statements, tagged as blocks of text and in detail. <i>(Filed herewith.)</i>				

+ Certain confidential portions have been omitted pursuant to a confidential treatment request filed separately with the Securities and Exchange Commission.

\* Indicates management contract or compensatory plan or arrangement.



\* Pursuant to applicable securities laws and regulations, we are deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and are not subject to liability under any anti-fraud provisions of the federal securities laws as long as we have made a good faith attempt to comply with the submission requirements and promptly amend the interactive data files after becoming aware that the interactive data files fail to comply with the submission requirements. Users of this data are advised pursuant to Rule 406T of Regulation S-T that this interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER**

I, Thomas Gutierrez, certify that:

1. I have reviewed this transition report on Form 10-K of GT Advanced Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statements of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in his report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2013

/s/ THOMAS GUTIERREZ

Thomas Gutierrez  
*President and Chief Executive Officer*

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER**

I, Richard J. Gaynor, certify that:

1. I have reviewed this transition report on Form 10-K of GT Advanced Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statements of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in his report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2013

/s/ RICHARD J. GAYNOR

Richard J. Gaynor  
*Vice President and Chief Financial Officer*

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Transition Report on Form 10-K of GT Advanced Technologies Inc. (the "Company") for the nine-month transition period ended December 31, 2012, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company, certify pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to their knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as amended; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2013

/s/ THOMAS GUTIERREZ

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Thomas Gutierrez  
*President and Chief Executive Officer*  
*(Principal Executive Officer)*

Date: March 1, 2013

/s/ RICHARD J. GAYNOR

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Richard J. Gaynor  
*Vice President and Chief Financial Officer*  
*(Principal Financial Officer)*

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## Directors

### **Matthew E. Massengill**

Chairman of GT Advanced Technologies,  
Former Chairman, President and Chief Executive  
Officer, Western Digital Corporation

### **J. Michal Conaway**

Founder and Chief Executive Officer,  
Peregrine Group, LLC

### **Kathleen A. Cote**

Former Chief Executive Officer,  
Worldport Communications, Inc.

### **Ernest L. Godshalk**

Former Managing Director,  
Elgin Management Group

### **Thomas Gutierrez**

President and Chief Executive Officer,  
GT Advanced Technologies

### **Mary Petrovich**

Former General Manager, Chairman and Chief  
Executive Officer, AxleTech International LLC

### **Robert E. Switz**

Former Director, President, Chief Executive Officer,  
and Chairman, ADC Telecommunications, Inc.

### **Noel G. Watson**

Chairman, Jacobs Engineering Group, Inc.

### **Thomas Wroe, Jr.**

Chairman, Sensata Technologies Holdings N.V.

## Executive Officers

### **Thomas Gutierrez**

President and Chief Executive Officer

### **Richard Gaynor**

Vice President and Chief Financial Officer

### **Daniel Squiller**

Chief Operating Officer

### **Hoil Kim**

Vice President, Chief Administrative Officer,  
General Counsel and Secretary

### **David W. Keck**

Executive Vice President, Worldwide Sales  
and Services

### **Vikram Singh**

Executive Vice President, Advanced Systems  
and Corporate Research and Development

### **Jeffrey J. Ford**

Vice President of Business Development,  
DSS Business

## Shareholder Information

### **GT Advanced Technologies**

20 Trafalgar Square  
Nashua, NH 0306  
Phone: +1 603.883.5200

**www.gtat.com**

### **Independent Registered Public Accounting Firm**

Deloitte & Touche LLP  
200 Berkeley Street  
Boston, MA 02116 USA

### **Transfer Agent and Registrar**

Computershare Shareholders Services

#### *Mailing Address:*

P.O. Box 43006  
Providence, RI 02940-3006

#### *Overnight Delivery:*

250 Royall Street  
Canton, MA 02021

*Toll-Free Dedicated Number:* 877.289.0116

*TDD for Hearing Impaired:* 800.231.5469

*TDD Foreign Shareowners:* 201.680.6610

*Foreign Shareowners:* 201.680.6578

Shareholder website: **www.computershare.com/investor**

Shareholder online inquiries:

**https://www-us.computershare.com/investor/Contact**

**Exchange: NASDAQ Global Select Market**

**Ticker Symbol GTAT**



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