



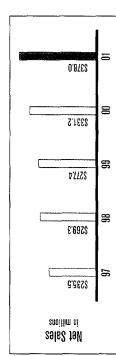
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PHOTRONICS

Photronics is the world's leading manufacturer of reticles, also known as photomasks, and the leading innovator in the application and advancement of reticle technologies. Reticles are high-precision quartz plates containing microscopic images of electronic circuits. An enabling technology in the manufacture of semiconductors, reticles transfer circuit patterns onto semiconductor wafers during the fabrication of integrated circuits. Reticle technology is also critical in the production of microelectronic mechanical systems (MEMS), biosensors and a variety of photonics devices. Reticles are produced at strategically located manufacturing facilities in Asia, Europe and North America, in accordance with design data provided by customers.

"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: Except for historical information, the matters discussed in this annual report that may be considered forward looking statements may be subject to certain risks and uncertainties that could cause the actual results to differ materially from those projected, including uncertainties in the market, pricing, competition, procurement and manufacturing efficiencies, and other risks detailed from time to time in the Company's SEC reports. The Company assumes no obligation to update the information in this report. The Company's financial statements for the fiscal year 2001 are contained in the Form 10-K.

FINANCIAL HIGHLIGHTS 2001



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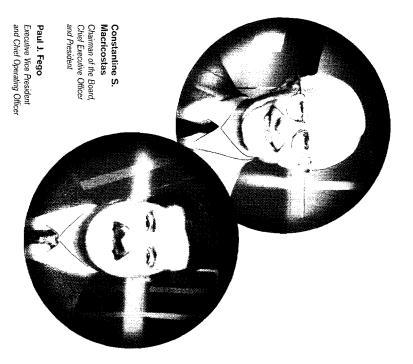
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excluding consolidation, restructuring and related charges

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PHOTHONICS, INC. & SUBSIDIARIES - ANNUAL REPORT 2001



the semiconductor industry landscape they would present challenge. Few could have anticipated the depth of those challenges or the unique reshaping of Last year, we reported performance that set new records and highlighted a future of promise and

In difficult environments, companies either transform and grow or they stagnate and perish. Today, Photronics is flourishing as a result of its ability to adapt and perform at world-class levels. Patience and preparedness enabled us to identify and convert new opportunities into competitive advantage. That advantage has enabled the Company to become the world's leading and largest photomask manufacturer. This is a major milestone for the Company and our team is excited about carrying this momentum into the new fiscal year.

Experience, commitment to our customers, technology investment and manufacturing efficiency fueled our successful transformation during the year. Our technology continues to position Photronics for global market share growth. Simultaneously, a major consolidation plan streamlined operations to maximize efficiencies and sharpen focus on improving Photronics' returns on assets, equity and capital. Strategic acquisitions strengthened long-time customer relationships while expanding our customer base. Finally, our most important asset continued to be our people. They ARE customer service, the vision of technology, and the embodiment of efficiency—truly the best and brightest in the photomask industry today. Our organization remains robust and strong through their innovation and achievements.

Financial Highlights

Record sales of \$378 million for fiscal 2001 were up 14% from the prior year. This was the ninth consecutive year of revenue growth—a record unmatched in the photomask industry. Revenue per employee of \$224,000 in fiscal 2001

is the industry's benchmark and gives us a strong base for future improvement. We are particularly pleased with our revenue growth during a period in which the semiconductor industry recorded three of the most severe cyclical downturns ever. Through it all, Photronics grew its revenues and maintained profitability from operations, consolidated the market, and implemented new processes to improve asset utilization and customer service.

temporarily closed down their wafer fabrication facilities in During the summer of 2001, many of our customers to \$287.2 million, bringing book value to \$9.48 per share totaled \$113.6 million, while shareholders' equity amounted \$0.74 per diluted share. Cash generated by operations and related charges, decreased 12% to \$22.1 million, or regions. Net income, excluding consolidation, restructuring enable the Company to further expand share in these in both regions. Continued investments in technology will manufacturing presence and successful market share gains 17.2%, or \$64.8 million, reflecting Photronics' expanded revenues, or \$71.3 million, and from Europe increased to fiscal 2002. Revenues from Asia increased to 18.9% of total to reach approximately 40% of revenues as Photronics exits quarter of fiscal 2000. Demand for this technology is expected 18% of revenue-a 400% dollar increase since the first fiscal 2001, demand for 0.18 micron technologies reached years of strong revenue growth. During the fourth quarter of tinue to be the major drivers of Photronics' nine consecutive together with focused expansion into Asia and Europe, con-The demand for advanced photomask or reticle technology,









response to the cyclical downturn, significantly impacting our business. However, through effective management controls and experience, we mitigated the effects and sustained profitable operations when others could not. Cash flows from operations funded capital expenditure plans and enabled us to pay down debt, while demand for our securities was strong, enabling us to raise \$200 million in growth capital through the issuance of convertible securities in December.

Looking forward, Photronics is focused on its goal of becoming a \$1 billion company. We are currently on track to achieve this milestone with revenues expected to grow 15% to 25% during fiscal 2002. Our advanced manufacturing technology, customer service and international expansion are fundamental to this growth plan.

In high-end manufacturing, we thoroughly evaluated all manufacturing systems for technology nodes at and below 130 nanometers, then implemented solutions after careful consultation with customers. Our selection of these tools represents a critical decision, as we anticipate customers will begin moving products into high volume 130 nanometer production during the second half of fiscal 2002. The solutions resulting from this evaluation are reflected in our Nano Technology Line (NTL) tools. Photronics' strategy is to install a single NTL manufacturing line in each of the world's major semiconductor manufacturing regions and qualify customers migrating to that technology at that region's highen site. Additional investments in high-end capacity will be made only as customer demand grows, ensuring optimized return on invested capital.

The first suite of Nano Technology Line tools were installed in our state-of-the-art manufacturing facility in Taiwan. This

included new reticle lithography systems from Hitachi and Toshiba, inspections systems from KLA-Tencor, and dry etch tools from Applied Materials. As the major wafer foundry manufacturers, including Taiwan Semiconductor Manufacturing Corporation (TSMC) and United Microelectronics Corporation (UMC), now set the standards for advanced wafer process technology, our reticle fabrication facility in Taiwan must be capable of meeting their most challenging requirements. Our NTL investments also align our advanced manufacturing and process development capabilities with the leading captive photomask facilities run by industry leaders such as IBM, Intel, NEC, Samsung and TSMC. The captive focus on next generation process development makes them a strategic benchmark for our own capability.

The decision to install our initial Nano Technology Line systems in Taiwan reflects both the need to sustain regional technological leadership, and support the largest single market for 130 nanometer technology. The outsourcing of high-end integrated circuit manufacturing to the foundries gains momentum as companies turn to foundry partners to minimize capital exposure from cyclical downturns. Our capabilities in Korea, Singapore and Taiwan position Photronics as the most comprehensive reticle solutions supplier to each of those companies pursuing an outsourcing strategy.

Our NTL systems are also ramping into production in Europe. Based on our technological capabilities and focus on customer service, Photronics has increased European market share by supporting major customers including Philips Semiconductor and ST Microelectronics as they accelerate their demand down to and below the 130 nanometer technology threshold.

In North America, our initial NTL systems are being installed in our facility in Austin, Texas. Together the Austin and Taiwan facilities conduct a significant portion of our R&D activity and will play a crucial role in advancing our proprietary Sub-Wavelength Reticle Solutions" (SRS") process platforms. As the semiconductor industry pushes deeper into the sub-wavelength era, Photronics has leveraged the competitive advantage inherent in its SRS technologies to deliver tremendous value to customers through their ability to extend the performance of their manufacturing systems.

NTL platforms and processes are not the only innovations being introduced into Photronics facilities around the infrastructure needed to manage, manipulate and store the technology devices approach 30 gigabytes. In 2005, the industry's technology roadmap expects that these files will exceed 300 gigabytes! A photomask supplier addressing this explosive data management demand will maximize resulting in both competitive advantage and a path to continuously improved financial performance. This initiative demonstrates Photronics' multidimensional understanding of the manufacturing and service issues arising from to address the increasing complexities of semiconductor data management. The ATDC is installing the technology terabytes of customer design data required for photomask production. Current data file sizes for 130 nanometer manufacturing efficiencies and greatly reduce cycle times, customers' accelerated demand for technology. The ATDC nitiative also enables the Company to maximize utilization of ts NTL and standard product assets and further assert itself ment of the Advanced Technology Data Center" (ATDC) world. During the year, the Company announced the developas an innovative customer service leader.

to add distinguished scientists in semiconductor lithography systems is our investment in people. Our R&D team continues Complementing investments in manufacturing and information with customers, equipment and materials suppliers, and commitment to technology excellence. Strategic relationships and materials, drawn to the Company because of its ships are the foundation for the strong customer relationships and service suppliers critical to their success. These partnerpartnership with our customers, as well as other technology Our open-ended research platform generates a real sense of process technologies-while obtaining valuable insight into proprietary Sub-Wavelength Reticle Solutions family of Photronics improve its technology leadership-including our leading research consortia like IMEC and SEMATECH, Kelp that have buffered Photronics from cyclical market forces. the semiconductor industry's next generation requirements

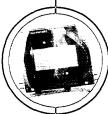
Acquisitions once again played an important role in the evolution of Photronics. During the fourth quarter, the Company acquired technologies and assets from the captive photomask manufacturing operation of Conexant Systems. Conexant, a long time Photronics customer, divested its captive photomask operations and will outsource manufacture of their semiconductor devices to Taiwanese foundry supplier UMC—Photronics' largest customer in Taiwan. Separately the companies also signed a multi-year supply agreement and strategic technology alliance making Photronics Conexant's primary supplier of photomask technology and services.

We also acquired a controlling equity interest in PKL Co. Ltd., a Korean photomask manufacturer publicly traded on Kosdaq, through negotiated transactions with several of their large shareholders. Our relationship with PKL spans many years. Finally, the timing was right for Photronics to elevate that



photomask industry's most comprehensive solution for the ,photomask manufacturing network, and a strategic link in the tions. In combination with Photronics facilities in Singapore a customer base that is accelerating their technology transiand tečhnology, PKL brings Photronics a new strategic emerging opportunities in China and new outsourcing oppor-Photronics to increase its Asian market share, including region's fast growing foundry industry. This addition positions and Taiwan, PKL becomes a major asset in Asia's strongest relationship through a larger investment in PKL. As a single to the inflastructure now operating in our Taiwan facility and they are implementing a technology strategy ideally matched manufacturers. Early feedback from Samsung is excellent, as customet - Samsung, one of the world's leading semiconductor tunities in Japan. In addition to its strong reputation for service the aggressive investment and R&D effort required to support facility manufacturer, PKL lacked the critical mass to sustain soon to be installed in our Korean site

The realignment of Photronics' manufacturing network during the year included the consolidation of three manufacturing facilities in California, Florida and Germany. An after tax charge of \$26.1 million, or \$0.87 per diluted share, was taken in connection with this activity. The charge was primarily for non-cash items and will be recovered in less than two years. This planned consolidation, initiated as the final phase of the Company's acquisition of Align-Rite International, was completed six weeks ahead of schedule. Its successful implementation enabled the Company to rebalance both manufacturing capability and capacity to better address evolving industry technology requirements and increase focus on the goal of increasing capacity utilization and returns on assets. In addition to closing three manufacturing sites, the Company relocated numerous manufacturing tools,







requalified over 200 customers at new primary and secondary manufacturing locations, and reduced its overall workforce by almost 10%—all without disrupting a single customer.

Shortly before the fiscal year concluded, the Company announced a change in management structure. James Mac Donald, who had served as President and a member of the Company's Board of Directors, announced his retirement. Jim, the founder of Align-Rite and a long time photomask industry veteran, agreed to take on a senior management role in order to facilitate the smooth transition of Align-Rite into Photronics at the time the merger was finalized. Having achieved his objectives, he decided to step down and transition leadership of the Company to the next generation of management. Each of us at Photronics would like to thank Jim for his service to the Company, our customers, employees and shareholders. We wish him well in his new endeavors.

Succeeding Jim is Paul Fego, elected Executive Vice President and Chief Operating Officer of the Company in December. Paul assumes full responsibility for Photronics' global operations including sales, research and development, and information technology. Paul and his team represent the future of Photronics. Their broad range of experience within the semiconductor and photomask industries will help them provide innovative services to Photronics' customers. Their willingness to embrace the customer service and technology investment culture that has been so successful for Photronics will also insure that our approach remains fresh and our focus on shareholder value remains sharp.

Adversity and a belief in retaining the most talented people has made Photronics an infinitely stronger company over the years. Today, we see a dynamic global organization that has

aggressively established critical mass and grown revenues at a compounded annual growth rate of 21% over the last ten years. Photronics succeeds because it always looks forward. Our team continues to push the service envelope by equipping our facilities with state-of-the-art technologies and delivering the manufacturing efficiencies required to enhance competitiveness in Asia, Europe and North America. More important, our organization is composed of world-class photomask manufacturing professionals who understand that the customer and shareholder matter most.

ment and acquisition strategy that enabled us to become the must leverage the fact that Photronics' operations have been consistently profitable and generated superior margins compared with our competitors. While the Company must always have an appetite for strategic acquisitions, we realize we can no longer defer objectives for major improvements During this period, we sacrificed financial performance and improved financial returns because we adhered to an investworld's largest global photomask manufacturer. Now we always invest to be at the competitive forefront and it will in ROA, ROE and ROIC metrics. Aggressive plans in this regard are in place and generating early results consistent with our expectations. Our goal is to elevate our financial Building Photronics' critical mass did not come without cost. performance metrics into the top quartile of all semiconductor and equipment companies within five years. The competitive landscape is constantly reshaped by adversity. The opportunities such adversity creates always strengthen the strong and vanquish the weak—a pattern we have seen repeated throughout our 33 year history. Photronics is a company that is strong because its people know the value of commitment to excellence and embracing

change. They understand that their customer's success is their success. They know that by generating value for their shareholders, they create wealth for their family and friends in the communities where they live and work. The underlying fundamentals of the photomask industry remain strong and our expectation for growth is positive. The global semiconductor industry has begun to stabilize and we look forward to our future with a sense of excitement because we are clear in our vision and firm in our commitment to reach our \$1 billion goal sooner, rather than later.

The Photronics team has never been stronger and we see our momentum continuing to build. We are poised to expand our market share, increase our international presence, grow our high-end sub-wavelength revenues, improve our overall capacity utilization, reduce costs, and improve our returns on assets, equity, and invested capital. Thank you for your support and confidence in our Company. We look forward to reporting on our progress and achievements in what promises to be both a challenging and very exciting 2002.



Constantine S. Macricostas

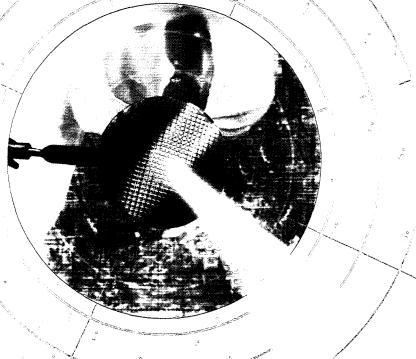
Chairman of the Board, Chief Executive Officer and President



Paul J. Fego

Executive Vice President and Chief Operating Officer

TRACKING ALINDINOAGO OL



An Emphasis on Process Excellence Provides Stability in Turbulent Markets

Investments in people and technology are critical to any business. Nowhere is that truer than in the semiconductor industry.

and efficiently transition into increasingly complex technology nodes world's leading semiconductor manufacturers to seamlessly performance of installed wafer lithography systems returns for our customers by greatly extending the Advanced wafer lithography strategies place the photomask Photronics' technology and services enable many of the n the critical path of semiconductor manufacturing rocesses—water lithography drives semiconductor tab prinking chip features and driving favorable investment rategy. High-end photomasks are essential in resolving despite the disruptions of cyclical downturns.

our technology well beyond the bleeding edge. installed manufacturing systems and processes to extend manufacturing facilities in Asia, Europe and North America customers competitive. During 2001, state-of-the-art technologies and implement the services needed to keep We understand. Photronics continues to invest in the

lithography systems in our Hsin-Chu, Taiwan facility reflect Hitachi 950S vector scanning electron beam photomask Installation of systems like the Toshiba EBM-3500 and

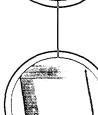
> integration with customers while enhancing competitiveness. customer and wafer fab specifications, we simplify process and wafer foundries. By matching our capabilities with many of the world's leading semiconductor manufacturers demand at the 130 nanometer technology node and beyond. Photronics' continuing commitment to supporting emerging These tools are the technology of choice, being specified by

technology as a tool for simplifying operations for customers approach to service and are a recognition of information via the web. Tools like CyberMask reflect our partnership access to scheduling and production status information during photomask fabrication and increasing customer clients, streamlining workflow, reducing manual intervention extends innovative customer services into our largest solution that streamlines the fabrication of photomasks. It efficiency. CyberMask" is a proprietary web-based software focused on advanced solutions for service delivery and and systems. It is also a story of people and process But the Photronics story is more than a story of buildings and generating better returns for our shareholders.

process enhancement all wrapped in quality-it all Clear vision, consistent investment, continuous adds up to a better solution for Photronics' customers.

reach 7/1 R







Building a Technology and Service Network Like No Other

including widely variant competitive environments/and cultures. The Photronics name now reaches farther than at The semiconductor business is global and getting more so and Pacific Rim markets requires an industry leader to, understand service delivery from more perspectives; with each passing day. Aggressive growth in the European any time in our history.

Asian semiconductor manufacturers and foundries are wafer processing technologies. As increasing global volume aggressively installing 130 nanometer and 90 hanometer consolidates into the region, Photronics is there to suppor the organizations seeking to aggressively leverage newe technology nodes. In Europe, Photronics serves a technology-driven customer base by being the first merchant photomask manufacturer to install manufacturing technology to support 130 nanometer demand. During the year, the Company's site in Manchester, to locally fabricate phase shift mask technology. Completed with 100% yield and record cycle time, customers that previously had this technology imported from Japan or England became the first European merchant manufacturk

Such service improves the customer's time to market, thus North America now have direct access to it in the region. enhancing their overall competitive position in a rapidly shrinking global market place. In North America, Photronics continues to advance the work in process development and materials technology and customer service fronts through its groundsciences Innovative new services like CyberMask and the Advanced Data Technology Center distinguish the Company is a supplier who attends to all the details of advanced échnology support critical to a customer's success. breaking

is the industry becomes "more global," so does



thinks Old

Leveraging Intellectual Assets to Explore New Opportunities

"The difficulty lies, not in the new ideas, but in escaping the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds." (1)

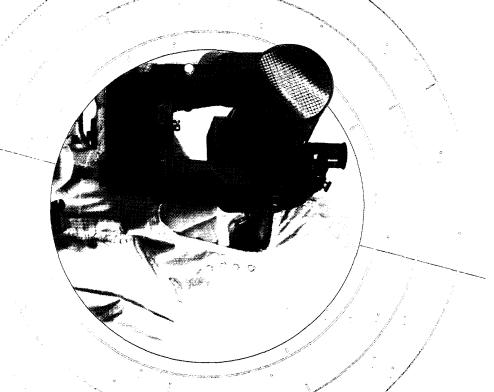
John Maynard Keynes had it right—the challenge of innovation is to apply what you know to explore and discern what you do not know. It is the unbounded horizon of opportunity that holds perhaps the most excitement for Photronics and its customers.

Throughout the current economic downturn, the Photronics R&D team and customer service organization have assertively established themselves as the source of innovation in the application of photomask technology and processes to solve problems beyond the fabrication of integrated circuits. Photronics' Sub-Wavelength Reticle Solutions were employed as part of a joint development effort which successfully demonstrated the ability to produce sub-100 nanometer features using KrF (248nm) exposure technology.

The work, conducted by MIT's Lincoln Laboratory under DARPA sponsorship, demonstrates the feasibility of extending 248 nanometer optical lithography technology well beyond its currently predicted limits. While Photronics remains a global leader in pursuing advanced next-generation lithography solutions through initiatives like the Next Generation Lithography Mask Center of Competency, a joint venture research program with IBM, we are simultaneously working to help customers squeeze every last ounce of productivity from their current generation of manufacturing technologies. This helps control chip costs while sustaining the continued advancement of new technology. It also represents significant added value enhancing our customers' profitability.

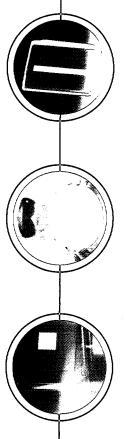
Beyond Integrated Circuits

No advances hold more promise than demonstrated success in the use of photomask technology for entirely new application domains, such as photonics. Photonics is the technology of generating and harnessing light or other forms of radiant energy whose quantum unit is the photon. Photonics applications include energy generation,



(1) J. M. Keynes, Quoted in: K. Eric Drexler Engines of Creation: the Coming Era of Nanotechnology, Bantam, New York, 1987, p 231.





communications and information processing. Photronics has introduced a new proprietary phase mask technology that holds the promise of dramatically enhancing efficiency in the passive optical components industry.

wavelength selectivity and dispersion compensation in high performance optical networks employing dense optical networking based on DWDM components is a Bragg Gratings, a critical component for controlling wavelength division multiplexing (DWDM). High-speed Phase masks are used in the manufacture of Fiber critical enabler in the proliferation of high-speed internet services, storage area networks and other information technologies. The current approach to phase mask manufacture, interference lithography, is inefficient and technically constrained. However, prior to Photronics' proprietary process enhancements, the use of electron beam phase masks was limited by "stitching errors," or excess noise, in the final gratings. Photronics' patentpending process technology has reduced stitching errors to the point where they blend with normal background noise, making electron beam solutions not only feasible,

PHOTRONICS' PATENT-PENDING PROCESS
TECHNOLOGY HAS REDUCED STITCHING
ERRORS TO THE POINT WHERE THEY
BLEND WITH NORMAL BACKGROUND NOISE,
MAKING ELECTRON BEAM SOLUTIONS NOT
ONLY FEASIBLE, BUT THE NEW STANDARD.

but the new standard. Photronics' phase masks are already being employed by a select and growing group of the industry's leading global customers.

This type of creativity and innovation in the development of the phase mask market is just the tip of the iceberg. Photronics is a cohesive team of people—all focused on leveraging accumulated intellectual capital to solve

technology problems using mask technology. Photonics is one example. Micro electromechanical systems (MEMS), and advanced packaging are other promising areas of research, where Photronics scientists can apply their creativity to solving problems inherent in the delivery of new technologies to the marketplace.

Innovation, effective execution and customer service this is what Photronics is all about.



VISION. DIRECTION. PERFORMANCE.

11 Year Consolidated Financials—Consistent growth through technological leadership, strategic execution and superior customer service

Return on average equity Return on average assets Current ratio Book value per share	Working capital Property, plant and equipment, net Total assets Long-term debt Shareholders' equity	Supplemental disclosures: Depreciation and amortization Capital additions	Net increase (decrease) in cash and equivalents	Cash flows provided by (used for): Operating activities Investing activities Financing activities	Number of shares used in diluted per share calculation	Earnings (loss) per diluted share	Net sales Cost of goods sold Research and development Consolidation, restructuring and related charges Operating income Net income (loss)	(Amounts in thousands, except per share data)
-1.4% -0.6% 1.47 \$ 9.48	48,732 402,776 673,538 188,021 287,161	72,975 48,670	(3,498)	\$ 113,579 (98,560) (17,011)	29,919	\$ (0.13)	\$ 377,969 254,272 24,858 38,100 6,981 (4,026)	2001 A
3.7% 1.8% 2.41 \$ 9.90	78,393 395,281 615,972 202,797 293,980	56,868 43,599	18,541	\$ 49,588 (74,340) 42,800	29,831	\$ 0.34	\$ 331.212 220.650 20,731 23,000 20,772 10,176	2000 в
5.9% 3.1% 1.48 \$ 9.10	33,484 348,144 502,309 148,281 254,130	47,798 83,719	(4,889)	\$ 65,007 (95,951) 25,954	28,105	\$ 0.51	\$ 277,395 193,467 16,611 - 27,198 14,448	1999
11.7% 6.4% 1.73 \$ 8.52	43,506 282,964 421,702 104,261 238,196	38,271 80,748	(35,215)	\$ 60,358 (91,863) (2,748)	33,093	\$ 0.92	\$ 269,293 170,864 13,402 3,800 44,992 26,582	1998
15.5% 9.6% 2.46 \$ 7.75	92.125 225.902 403,993 106,194 217,348	23,913 112,321	33,106	\$ 56,640 (129,555) 105,741	30,707	\$ 1.07	\$ 235,452 145,032 10,938 - 48,470 30,961	1997
16.2% 12.1% 1.80 \$ 6.57	38,867 132,183 242,325 1,987 181,702	14,921 59.673	(8,032)	\$ 42,266 (62,026) 11,732	27,981	\$ 0.93	\$ 193,361 118,758 8,658 - - 39,295 25,967	1996
19.8% 14.6% 2.46 \$ 5.50 \$	53,502 78,569 191,479 3,715 140,022	11,154 38,923	11,432	\$ 38,596 (57,305) 30,143	24,907	\$ 0.89	\$ 150,703 92,570 7,899 - 28,592 22,056	1995
16.5% 12.4% 3.33 3.95	35,360 43,554 110,798 3,247 82,778	10,103 6,779	18,171	\$ 23,550 : (5,472) 95	22,278	\$ 0.54	\$ 100,913 : 65,037 4,738 - 17,214 12,065	1994
9.8% 7.1% 3.20 \$ 3.10 \$	17,972 46.823 84,526 4,219 63,260	6,934 16,871	(1,331)	\$ 12,281 ((12,989) (599)	18,865	\$ 0.28	\$ 64.427 \$ 43,703 \$ 2,744 \$ - 8.027 \$ 5,235	1993
10.9% 7.6% 6.30 \$ 2.58 \$	19,989 30,823 62,009 6,282 44,090	5,234 12,914	2,714	\$ 9,247 \$ (6,108) (439)	18,118	s 0.25 s	\$ 56,233 \$ 38,031 \$ 2,549 \$ - 6,769 \$ 4,546	1992
22.6% 15.4% 6.35 2.31	24,238 22,282 57,749 7,846 39,229	4,059 6,409	319	8,845 (17,826) 9,300	17,245	0.40	\$ 56,829 36,443 2,613 - 9,617 6,968	1991

A Includes consolidation charges of \$38.1 million (\$26.1 million after tax, or \$0.87 per diluted share) in connection with the final phase of the Company's merger with Align-Rite International, Inc. and subsequent consolidation of facilities in California, Florida and Germany.

B includes restructuring and related charges incurred in connection with the closure of the Company's Sunnyvale. California and Neuchâtel, Switzerland facilities and merger related expenses totaling \$14.8 million (after tax) or \$0.52 per diluted share.



Leveraging the Power of Communications to Strengthen Customer Relationships and Build Brand Equity

For Photronics, it has opened up unique opportunities to streamline operations and improve service, while simultaneously building more robust relationships with customers. The Internet has transformed how business is conducted.

Key Customer Initiatives

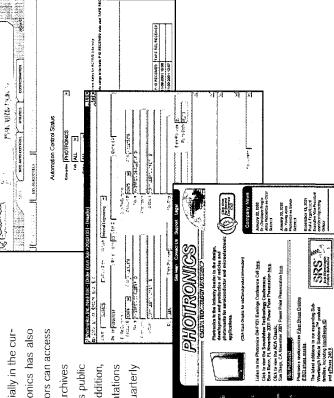
throughout the design to manufacturing process. The use munications between customers and our technical team of Internet-based applications is a mission-critical link in The Photronics service strategy involves continuous comthis communications process, including:

- ☐ MaskLink", our client Extranet where customers can repository for secured distribution of critical application quickly and conveniently monitor order status and production plans. MaskLink also provides a structured data to clients throughout the planning and production
- □ CyberMask", our automated mask order system. It is us deliver measurable cycle time reductions, improve resource utilization and streamline operations while based on industry-standard data specifications and helps processing increasingly complex mask specifications.

Key Investor Initiatives

expanded its Investor Relations effort. Investors can access rent tumultuous market environment, Photronics has also To support the needs of our investors, especially in the curand all SEC filing data through the Photronics public Internet site: www.photronics.com. In addition, an array of technical and investor presentations extensive historical data, conference call archives from recent conferences as well as quarterly earnings conference calls have

been posted. By using the Internet, it is our hope that we understand our Company, our can help all our investors better goals and our industry.



BRANDED PRODUCTS AND SERVICES—BUILDING A FOUNDATION FOR INDUSTRY LEADERSHIP

leading-edge research and development effort into distinctly branded offerings that raise visibility in the industry and create sustainable differentiation for the Photronics has worked aggressively to transform its Company.

□ NanoRange "IID

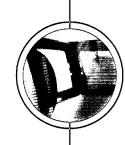
□ MaskTrack □ e-Phase " 248 II

□ CyberMask™ □ e-Phase, 193

☐ Sub-Wavelength Reticle Solutions" (SRS") ☐ Songbird" Chirp Phase Masks ☐ SSE" Uniform Phase Masks □ t-Phase" 193 □ Ultrares* MPG



CORPORATE INFORMATION







Form 10-K and Additional Information

A copy of the annual report filed with the Securities and Exchange Commission on Form 10-K may be obtained by writing the Secretary at the headquarters address listed on this page or by visiting the Company's Web site at www.photronics.com.

Auditors

Deloitte & Touche LLP

Registrar and Transfer Agent

Registrar and Transfer Company
10 Commerce Drive
Cranford, New Jersey 07016

Investor Contact and General Information

For answers to general questions about Photronics, please call **(203) 775-9000** and ask for Investor Relations. You may also forward your inquiries via email to mmccarthy@brk.photronics.com.

Notice of Annual Meeting

The Company's Annual Meeting will be held on Wednesday, March 20, 2002, 12:00 noon, local time, at the Marriott Marquis Hotel, 1535 Broadway, New York, New York 10036.

NASDAQ Symbol

PLA

Wanufacturing Network

Allen, lexas

Austin, Texas Brookfield, Connecticut Milpitas, California Phoenix, Arizona

Dresden, Germany Manchester, United Kingdom Wales, United Kingdom

Cheong-an, Choong-nam, Korea Hsin-Chu City, Taiwan Singapore

PHOTRONICS, Inc. 1061 East Indiantown Road Jupiter, Florida 33477

www.photronics.com



CORPORATE INFORMATION

Corporate Officers

Constantine S. Macricostas Chairman of the Board, Chief Executive Officer and President

Paul J. Fego
Executive Vice President
and Chief Operating Officer

Robert J. Bollo
Senior Vice President,
Finance and Chief
Financial Officer

Steven Carlson Senior Vice President, Technology

Technology Daniel Del Rosario

Daniel Del Rosario Senior Vice President, Asía

Vice President, Quality

Amanuel Gobena

Vice President, North America

Shawn Knox Vice President,

Information Systems
Michael W. McCarthy

Planning and Business

Development
John Carroll

Senior Vice President,

Jack P. Moneta

Vice President, Investor Relations and Corporate Communications

James F. McEllis Vice President,

Vice President, Secretary

James A. Eder

Human Resources

Vice President,

and General Counsel

Barry Fritzer

Vice President,
North American Sales
Barry Rockwell

Vice President, Central Manufacturing and Equipment Engineering

John G. Smith Vice President, Europe

Board Of Directors

Constantine S. Macricostas Chairman of the Board Photronics, Inc.

Vice President, Controller

Sean T. Smith

J. Gregory Hickey

Treasurer

Michael J. Yomazzo Vice Chairman Photronics, Inc. Walter M. Fiederowicz, Esq. Private Investor and Consultant

Joseph A. Fiorita, Jr. CPA

Partner

Fiorita, Kornhaas and Van Houten, P.C. Willem D. Maris

President and Chief Executive Officer, Retired ASM Lithography



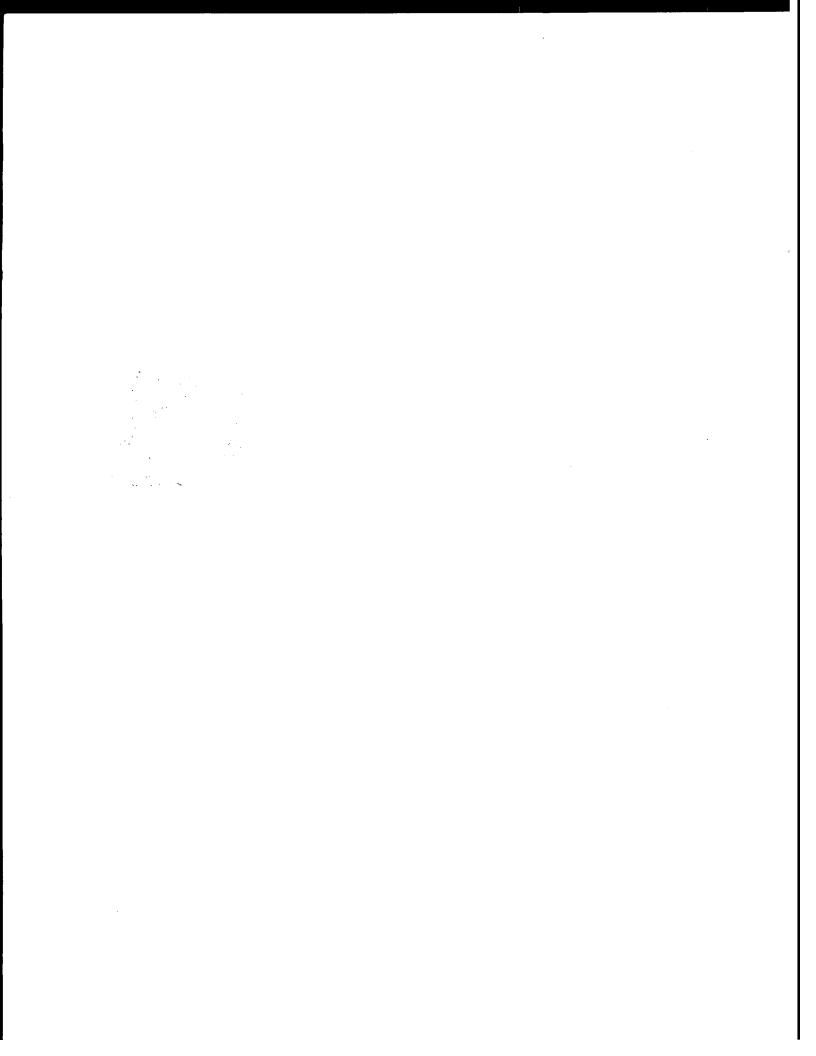
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

	rokvi	U-K
(Mark One)		
⊠ AN	NUAL REPORT PURSUANT T THE SECURITIES EXCHA For the fiscal year ended	ANGE ACT OF 1934
	OR	
☐ TRA	NSITION REPORT PURSUANT THE SECURITIES EXCHA	
	For the transition period from	to
	Commission File Nu	mber 0-15451
	Photronic (Exact name of registrant as sp	S, IIIC.
` .	Connecticut or other jurisdiction of organization)	06-0854880 (IRS Employed Identification No. 37
	ast Indiantown Road, Jupiter, FL. f principal executive offices)	33477 (Zip Code) SECTION
Re	gistrant's telephone number, includ	ing area code (561) 745-1222
	Securities Registered Pursuant to	Section 12 (b) of the Act:
Title of each class:		Name of each exchange on which registered
None		
	Securities Registered Pursuant to	Section 12 (g) of the Act:
	Common Stock, \$0.01 pa (Title of Ch	•
or 15(d) of the Secu periods that the reg	rities Exchange Act of 1934 durin	led all reports required to be filed by Section 13 g the preceding 12 months (or for such shorter eports), and (2) has been subject to such filing
contained herein, an	d will not be contained to the best	s pursuant to Item 405 of Regulation S-K is not of registrant's knowledge in definitive proxy or it III of the Form 10-K or any amendment to this
aggregate market v		gistrant's Common Stock were outstanding. The held by non-affiliates of the registrant as of
	DOCIMENTS INCORPORA	TED BY REFERENCE

Proxy Statement for the 2002 Annual Meeting of Shareholders to be held on March 20, 2002.

Incorporated into Part III of this Form 10-K.



ITEM 1. BUSINESS

General

Photronics, Inc. and its subsidiaries (the "Company" or "Photronics") is one of the world's leading manufacturers of photomasks, which are high precision photographic quartz plates containing microscopic images of electronic circuits. Photomasks are a key element in the manufacture of semiconductors and are used as masters to transfer circuit patterns onto semiconductor wafers during the fabrication of integrated circuits and, to a lesser extent, other types of electrical components. The Company operates principally from 11 facilities, five of which are located in the United States, three in Europe and one each in Korea, Singapore and Taiwan.

The Company is a Connecticut corporation, organized in 1969. Its principal executive offices are located at 1061 East Indiantown Road, Jupiter, Florida, 33477, telephone (561) 745-1222.

Fiscal 2001 and Recent Developments

In April 2001, Photronics initiated a plan (the "consolidation plan") to consolidate its global photomask manufacturing network in order to increase capacity utilization and manufacturing efficiencies, as well as to accelerate the expansion of its world-class technology development. The consolidation plan was the final phase of the Company's June 2000 merger with Align-Rite International, Inc. ("Align-Rite"). The principal components of the consolidation plan included the closing of the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida, and Heilbronn, Germany. The Company recorded consolidation and related charges associated with this plan of \$38.1 million in the second quarter of 2001. A more detailed description of the consolidation plan is contained in Item 7 of Part II of this Form 10-K under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations."

In August 2001, the Company completed the acquisition of a majority equity interest in PKL Co., Ltd. ("PKL"), a leading supplier of photomasks in Korea.

On December 5, 2001, the Company announced its operating results for the fiscal year ended October 31, 2001. During the latter half of 2001, the Company experienced a slow-down in new design releases for mature and high-end technology products and increased competitive pricing pressures for photomasks as a result of the rapid downturn in the global semiconductor industry. A more detailed description of the Company's 2001 operating results is contained in Item 7 of Part II of this Form 10-K under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations."

On December 12, 2001, the Company sold \$200 million of 4.75% Convertible Subordinated Notes due 2006 (the "Notes") in a private offering pursuant to the Securities and Exchange Commission ("SEC") Rule 144A. The Notes are convertible into the Company's common stock at a conversion price equal to \$37.00 per share, subject to adjustment in certain circumstances.

Manufacturing Technology

The Company manufactures photomasks, which are used as masters to transfer circuit patterns onto semiconductor wafers. The Company's photomasks are manufactured in accordance with circuit designs provided on a confidential basis by its customers. The typical manufacturing process for one of the Company's photomasks involves the receipt and conversion of circuit design data to manufacturing pattern data. A lithography system then exposes the circuit pattern onto the photomask. The exposed areas are dissolved and etched to produce that pattern on the photomask. The photomask is inspected for defects and conformity to the customer design data, any defects are repaired, any required pellicles (or protective membranes) are applied and, after final cleaning, the photomask is shipped to the customer.

The Company currently supports customers across the full spectrum of integrated circuit production technologies by manufacturing photomasks using electron beam or laser-based technologies and, to a

significantly lesser degree, optical-based technologies. Laser-based and electron beam systems are the predominant technologies used for photomask manufacturing. These technologies are capable of producing the finer line resolution, lighter overlay and larger die size for the larger and more complex circuits currently being designed. Laser and electron beam generated photomasks can be used with the most advanced processing techniques to produce VLSI (very large-scale integrated circuit) devices. The Company currently owns a number of laser and electron beam systems and has committed to purchase additional advanced systems in order to maintain the ability to produce the most complex photomasks. The production of photomasks by the optical method is less expensive and precise. The optical method traditionally is used to manufacture less complex and lower priced photomasks.

The first several layers of photomasks sometimes are required to be delivered by the Company within 24 hours from the time it receives a customer's design data. The ability to manufacture high quality photomasks within short time periods is dependent upon efficient manufacturing methods, high yield and high equipment reliability. The Company believes that it meets these requirements by making significant investments in manufacturing and data processing systems and statistical process control methods to optimize the manufacturing process and reduce cycle times.

Quality control is an integral part of the photomask manufacturing process. Photomasks are manufactured in temperature, humidity and particulate controlled clean rooms because of the high level of precision, quality and yields required. Each photomask is inspected several times during the manufacturing process to ensure compliance with customer specifications. The Company continues to make a substantial investment in equipment to inspect and repair photomasks and to ensure that customer specifications are met. After inspection and any necessary repair, the Company utilizes proprietary processes to clean the photomasks prior to shipment.

In the fourth quarter of 2001, the Company announced the opening of its first Advanced Technology Data Center ("ATDC") in Fremont, California. The ATDC centralizes, standardizes, and automates the front-end reticle data preparation process for multiple sites within the Company's manufacturing network.

Sales and Marketing

The market for photomasks primarily consists of domestic and foreign semiconductor manufacturers and designers, including a limited number of manufacturers who have the capability to manufacture photomasks. Generally, the Company and each of its customers engage in a qualification and correlation process before the Company becomes an approved supplier. Thereafter, the Company typically negotiates pricing parameters for a customer's orders based on the customer's specifications. Some prices may remain in effect for an extended period. In some instances, the Company enters into purchase arrangements, based on the understanding that, as long as the Company's performance is competitive, the Company will receive a specified percentage of that customer's photomask requirements.

The Company conducts its sales and marketing activities primarily through a staff of full-time sales personnel and customer service representatives who work closely with the Company's management and technical personnel. In addition to the sales personnel at the Company's manufacturing facilities, the Company has sales offices throughout the United States, Europe and Asia.

The Company supports international customers through both its domestic and foreign facilities. The Company considers its presence in international markets important to attracting new customers, providing global solutions to its existing customers and serving customers that utilize manufacturing foundries outside of the United States, principally in Asia. For a statement of the amount of net sales, operating income or loss, and identifiable assets attributable to each of the Company's geographic areas of operations, see Note 13 of Notes to the Consolidated Financial Statements.

Customers

The Company primarily sells its products to leading semiconductor manufacturers. The Company's largest customers during fiscal 2001 include the following:

Agere Systems Inc.
ASM Lithography
Atmel Corp.
Chartered Semiconductor Manuf., Ltd.
Intersil Corporation
International Business Machines Corp.
Linear Technology
LSI Logic Corp.
Macronix International Co., Ltd.
Maxim Integrated Products

Motorola Inc.
National Semiconductor Corporation
ON Semiconductor
Philips Semiconductor Manuf., Inc.
Seagate Technology LLC
Silicon Systems, Inc.
ST Microelectronics, Inc.
Texas Instruments Incorporated
TriQuint Semiconductor
United Microelectronics Corp.

The Company, during fiscal year 2001, sold its products and services to approximately 600 customers. During fiscal 2001, no single customer accounted for more than 10% of the Company's net sales. The Company's five largest customers, in the aggregate, accounted for 32% of net sales in fiscal 2001. A significant decrease in the amount of sales to any of these customers could have a material adverse effect on the financial performance and business prospects of the Company.

Research and Development

The Company conducts ongoing research and development programs intended to maintain the Company's leadership in technology and manufacturing efficiency. Since fiscal 1994, the Company has increased its investment in research and development activities and current efforts include deep ultraviolet, phase-shift and optical proximity correction photomasks for advanced semiconductor manufacturing as well as masks for next generation lithography ("NGL") "post-optical" manufacturing technologies. Phase-shift and optical proximity correction photomasks use advanced lithography techniques for enhanced resolutions of images on a semiconductor wafer. NGL technologies use an alternate exposure source other than the visible spectrum of light for wafer patterning and are designed for the manufacture of integrated circuits with critical dimensions below that believed possible with currently utilized optical exposure methods. Examples of NGL technologies include Extreme Ultraviolet Lithography ("EUV") and Electron Projection Lithography ("EPL"). Post-optical manufacturing technologies are still under development and have not yet been adopted as standard production methods. Since March 1999, NGL research and development has been conducted in connection with our research and development venture with IBM. The Company has incurred expenses of \$24.9 million, \$20.7 million and \$16.6 million for research and development in fiscal 2001, 2000 and 1999, respectively. The Company believes that it owns or controls valuable proprietary information necessary for its business as presently conducted. Recently, the Company has either applied for or been granted patents pertaining to its business segment. The Company believes that its intellectual property is and will continue to be important to the Company's technical leadership in the field of photomasks.

In November 2001, the Company introduced a new proprietary phasemask technology for the passive optical components industry. Phasemasks are used for the production of Fiber Bragg Gratings, which are enabling components in optical networking.

Materials and Supplies

Raw materials used by the Company generally include high precision quartz plates, which are used as photomask blanks, primarily obtained from Japanese suppliers (including Hoya Corporation ["Hoya"], Ulcoat Corporation ["Ulcoat"] and Toppan Printing, Co., Ltd. ["Toppan"]); pellicles, which are protective transparent cellulose membranes; electronic grade chemicals, which are used in the manufacturing process; and compacts, which are durable plastic containers in which photomasks are shipped. These

materials are generally available from a limited number of suppliers and the Company is not dependent on any one supplier for its raw materials. The Company believes that its utilization of a broad range of suppliers enables it to access the most advanced material technology available.

The Company has established purchasing arrangements with Hoya, Toppan and Ulcoat, and it is expected that the Company will purchase substantially all of its photomask blanks from these suppliers as long as their price, quality, delivery and service are competitive.

The Company relies on a limited number of equipment suppliers to develop and supply the equipment used in the photomask manufacturing process. Although the Company has been able to obtain equipment on a timely basis, the inability to obtain equipment when required could adversely affect the Company's business and results of operations. The Company also relies on these suppliers to develop future generations of manufacturing systems to support the Company's requirements.

Backlog

The first several levels of a set of photomasks for a circuit pattern sometimes are required to be shipped within 24 hours of receiving a customer's design. Because of the short period between order and shipment dates (typically from one day to two weeks) for a significant amount of the Company's sales, the dollar amount of current backlog is not considered to be a reliable indication of future sales volume.

Competition

The photomask industry is highly competitive and most of the Company's customers utilize more than one photomask supplier. The Company's ability to compete depends primarily upon the consistency of product quality and timeliness of delivery, as well as pricing, technical capability and service. The Company also believes that proximity to customers is an important factor in certain markets. Certain competitors have considerably greater financial and other resources than the Company. The Company believes that it is able to compete effectively because of its dedication to customer service, its investment in state-of-the-art photomask equipment and facilities and its experienced technical employees.

Since the mid-1980s there has been a decrease in the number of independent manufacturers as a result of independents being acquired or discontinuing operations. The Company believes that entry into the market by a new independent manufacturer would require a major investment of capital, a significant period of time to establish a commercially viable operation and additional time to attain meaningful market share and achieve profitability.

The Company estimates that for the type of photomasks it manufactures in North America, the size of the total market (captive and merchant) is approximately \$600 million, and the rest of the world approximately \$1.9 billion. The Company believes that it has a larger share of the United States market than any other photomask manufacturer and, as a result of obtaining a majority equity position in PKL, that it is one of the largest photomask manufacturers in the world. Competitors in the United States include DuPont Photomasks, Inc., and in international markets, Compugraphics, Dai Nippon Printing, DuPont Photomasks, Hoya, Taiwan Mask Corp. and Toppan. In addition, some of the Company's customers, such as IBM, NEC, TSMC and Samsung, possess their own captive facilities for manufacturing photomasks. Also, certain semiconductor manufacturers market their photomask manufacturing services to outside customers as well as to their internal organization.

Employees

As of December 31, 2001, the Company and its majority-owned subsidiaries employed approximately 1,690 persons on a full-time basis. The Company believes it offers competitive compensation and other benefits and that its employee relations are good. Except for employees in the United Kingdom, none of its employees are represented by a union.

ITEM 1A. EXECUTIVE OFFICERS

The names of the executive officers of the Company are set forth below, together with the positions held by each person in the Company. All executive officers are elected annually by the Board of Directors and serve until their successors are duly elected and qualified.

Name and Age	Position	Served as an Officer Since
Constantine S. Macricostas, 66	Chairman of the Board, Chief Executive Officer and Director	1974
Paul J. Fego, 44	Executive Vice President and Chief Operating Officer	1997
Robert J. Bollo, 57	Senior Vice President and Chief Financial Officer	1994
Steven D. Carlson, 37	Senior Vice President-Technology	1998
Daniel Del Rosario, 55	Senior Vice President-Asia Operations	1996
Jack P. Moneta, 58	Senior Vice President-Planning & Business Development	1997
James A. Eder, 56	Vice President, Secretary and General Counsel	2001
Sean T. Smith, 41	Vice President-Controller	2000

CONSTANTINE S. MACRICOSTAS was elected to his current position in July 2000. From August 1997 to June 2000, he was the Chairman of the Board. Prior to that date he was the Chief Executive Officer of the Company.

PAUL J. FEGO was elected Executive Vice President and Chief Operating Officer in December 2001. Prior to that date he had been Senior Vice President, North American Operations since December 1997. Before rejoining Photronics in 1996, Mr. Fego served as Operations Director at ST Microelectronics Inc. in Carrollton, Texas.

ROBERT J. BOLLO was elected Senior Vice President and Chief Financial Officer in July 2000. Prior to that date he had been Vice President and Chief Financial Officer since shortly after joining the Company in 1994.

STEVEN D. CARLSON was elected Senior Vice President, Technology in January 2000. Mr. Carlson is responsible for Process and Product Development, Research, Technical Marketing, Equipment Development and Technology Transfer. Mr. Carlson joined Photronics in 1998 as Vice President, R&D. Prior to joining Photronics, Mr. Carlson spent nine years with Texas Instruments, where he held various engineering and management positions.

DANIEL DEL ROSARIO was elected Senior Vice President, Asia Operations in 2001. Prior to that date, he had been Vice President, Asia since 1999 and Vice President, Marketing from 1996 to 1999. Before joining Photronics, Mr. Del Rosario held management positions in several international semiconductor companies.

JACK P. MONETA has been Senior Vice President-Planning and Business Development since 1997. Mr. Moneta joined Photronics in 1992 as Director of Texas Operations.

JAMES A. EDER has been Vice President, Secretary and General Counsel since January 2001. Prior to that date, he had been Vice President, Secretary, and General Counsel of Kollmorgen Corporation for approximately ten years.

SEAN T. SMITH has been Vice President and Controller since joining Photronics in April 2000. From 1999 to 2000, Mr. Smith was Vice President and Chief Financial Officer of Carvel Corporation, a closely held soft ice cream manufacturer. He was Controller and Chief Accounting Officer of Starter Corporation, a licensed apparel manufacturer, from 1995 to 1999.

ITEM 2. DESCRIPTION OF PROPERTY

The following table presents certain information about the Company's photomask manufacturing facilities.

Location	Facility Size (Sq. Ft.)	Type of Interest
Allen, TX	60,000	Owned
Austin, TX	50,000	Owned
Brookfield, CT (Building #1)	19,600	Owned
Brookfield, CT (Building #2)	20,000	Leased
Milpitas, CA (2 buildings)	49,000	Leased
Phoenix, AZ	30,000	Leased
Bridgend, South Wales	27,115	Leased
Cheonan, Korea	23,000	Leased
Dresden, Germany	10,000	Leased
Hsinchu, Taiwan	73,000	Leased
Manchester, England	42,000	Owned
Singapore	20,000	Leased

As part of the Company's consolidation plan, the Company closed the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida, and Heilbronn, Germany. In addition, the Company leases office space in several domestic and foreign locations. The Company believes that its existing manufacturing facilities are adequate for further plant expansion at existing sites.

The leased property in Brookfield, Connecticut, is leased from entities controlled by Constantine S. Macricostas under fixed lease rates which were determined by reference to fair market value rates at the beginning of the lease term. Mr. Macricostas is Chairman of the Board, Chief Executive Officer and a Director of the Company.

ITEM 3. LEGAL PROCEEDINGS

The Company is subject to various claims that arise in the ordinary course of business. The Company believes such claims, individually or in the aggregate, will not have a material adverse effect on the business of the Company.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of the Company's security holders during the fourth quarter of fiscal 2001.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED SHAREHOLDERS' MATTERS

The Common Stock of the Company is traded on the NASDAQ National Market System (NMS) under the symbol PLAB. The table below shows the range of high and low sale prices per share for each quarter for fiscal year 2001 and 2000, as reported on the NASDAQ NMS.

	<u>High</u>	Low
Fiscal Year Ended October 31, 2001:		
Quarter Ended January 31, 2001	\$37.00	\$15.25
Quarter Ended April 30, 2001	38.44	20.19
Quarter Ended July 31, 2001	31.50	17.50
Quarter Ended October 31, 2001	25.60	16.85
Fiscal Year Ended October 31, 2000:		
Quarter Ended January 30, 2000	\$36.13	\$18.13
Quarter Ended April 30, 2000	46.50	23.94
Quarter Ended July 31, 2000	33.69	19.25
Quarter Ended October 31, 2000	30.00	15.38

On December 31, 2001, the closing sale price for the Common Stock as reported by NASDAQ was \$31.35. Based on information available to the Company, the Company believes it has approximately 9,000 beneficial shareholders.

The Company has not paid any cash dividends to date and, for the foreseeable future, anticipates that earnings will continue to be retained for use in its business.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data, which has been adjusted as if Align-Rite was a consolidated, wholly owned subsidiary of the Company for all periods presented, is derived from the Company's consolidated financial statements. The data should be read in conjunction with the consolidated financial statements and notes thereto and other financial information included elsewhere in this Form 10-K. All share and per share amounts have been adjusted for a two-for-one stock split for shareholders of record on November 17, 1997.

	Years Ended				
	October 31, 2001 (a)	October 31, 2000 (b)	October 31, 1999	November 1, 1998 (c)	November 2, 1997
		(in thousand	ds, except per sh	are amounts)	
OPERATING DATA:					•
Net sales	\$377,969	\$331,212	\$277,395	\$269,293	\$235,452
Costs and expenses:					
Cost of sales	254,272	220,650	193,467	170,864	145,032
Selling, general and					
administrative	53,758	46,059	40,119	36,235	31,012
Research and development	24,858	20,731	16,611	13,402	10,938
Consolidation, restructuring and					
related charges	38,100(d)	23,000(e)		3,800	
Operating income	6,981	20,772	27,198	44,992	48,470
Other income (expense):					
Interest expense	(11,966)	(11,091)	(7,731)	(6,703)	(2,706)
Interest and other income, net	2,664	5,783	3,335	4,581	4,053

			Years Ended		
	October 31, 2001 (a)	October 31, 2000 (b)	October 31, 1999	November 1, 1998 (c)	November 2, 1997
	(in thousands, except per share amounts)				
Income (loss) before income taxes (benefit) and minority					
interest	(2,321)	15,464	22,802	42,870	49,817
Income tax provision (benefit)	(3,000)	4,700	8,354	16,288	18,856
Minority interest in income of consolidated subsidiaries	(4,705)	(588)	·	_	_
Net income (loss)	\$(4,026)	\$10,176	\$14,448	\$26,582	\$30,961
Earnings (loss) per share:					
Basic	\$ (0.13)(d)	$\frac{\$ 0.35}{}(e)$	\$ 0.52	\$ 0.95	\$ 1.12
Diluted	\$ (0.13)(d)	\$ 0.34(e)	\$ 0.51	\$ 0.92	\$ 1.07
Weighted average number of common shares outstanding:					
Basic	29,919	28,761	27,800	28,123	27,638
Diluted	29,919	29,831	28,105	33,093	30,707
	October 31, 2001	October 31, 2000	October 31, 1999	November 1, 1998	November 2,
BALANCE SHEET DATA:					
Working capital	\$ 48,732	\$ 78,393	\$ 33,484	\$ 43,506	\$ 92,125
Property, plant and equipment	402,776	395,281	348,144	282,964	225,902
Total assets	673,538	615,972	502,309	421,702	403,993
Long-term debt	188,021	202,797	148,281	104,261	106,194
Shareholders' equity	287,161	293,980	254,130	238,196	217,348

⁽a) Effective August 27, 2001, the Company acquired a majority of the total share capital of PKL Ltd. ("PKL"), a photomask manufacturer based in Korea. The operating results of PKL have been included in the consolidated statement of operations since the effective date of the acquisition.

⁽b) Effective June 20, 2000, the Company acquired a majority of the total share capital of Precision Semiconductor Mask Corporation (PSMC), a photomask manufacturer based in Taiwan. The operating results of PSMC have been included in the consolidated statement of operations since the effective date of the acquisition.

⁽c) On December 31, 1997, the Company acquired the internal photomask manufacturing operations of Motorola, Inc. in Mesa, Arizona. The consolidated statement of operations data includes the results of the former final phase of Motorola photomask operations since the effective date of the acquisition.

⁽d) Includes consolidation charges of \$38.1 million (\$26.1 million after tax, or \$0.87 per diluted share) in connection with the final phase of the Company's merger with Align-Rite International, Inc. and subsequent consolidation of facilities in California, Florida and Germany.

⁽e) Includes restructuring and related charges incurred in connection with the closure of the Company's Sunnyvale, California and Neuchatel, Switzerland facilities and merger related expenses totaling \$14.8 million (after tax) or \$0.52 per diluted share.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results of Operations for the Years Ended October 31, 2001, 2000 and 1999

Overview

In 2001, the Company completed the acquisition of a majority equity interest in PKL Co. Ltd. ("PKL"), a leading Korean photomask supplier for an aggregate purchase price of \$56 million. Prior to 2001, the Company owned approximately 6% of PKL. The acquisition was accounted for as a purchase. The operating results of PKL have been included in the Company's consolidated statement of operations since August 27, 2001. In August 2001, the Company acquired the photomask manufacturing assets of Conexant Systems, Inc., a semiconductor manufacturer based in Newport Beach, California.

In June 2000, the Company completed its merger with Align-Rite International, Inc. ("Align-Rite"), an independent publicly traded manufacturer of photomasks in the United States and Europe. Under the terms of the Merger Agreement, each of the 4,731,232 shares of common stock of Align-Rite issued and outstanding as of June 7, 2000 was converted into 0.85 shares of common stock of Photronics. Cash was paid in lieu of the issuance of any fractional shares of Photronics that would otherwise have been issued. Any stock options to acquire Align-Rite common stock that had not been exercised as of June 7, 2000 became fully vested options to acquire Photronics common stock in accordance with the merger agreement. The Company recorded expenses of \$5.5 million in fiscal 2000 relating to costs incurred in connection with this transaction. Such costs consisted primarily of fees for investment bankers, attorneys, accountants, financial printing and other related charges. The transaction was accounted for as a pooling-of-interests. Accordingly, the consolidated financial statements, the accompanying notes and this management's discussion and analysis have been restated to reflect the Company's financial position, results of operations and cash flows as if Align-Rite was a consolidated, wholly-owned subsidiary of the Company for all periods presented.

In June 2000, the Company acquired a majority share of Precision Semiconductor Mask Corporation (PSMC), a photomask manufacturer based in Taiwan, for approximately \$63.4 million in cash. The acquisition was accounted for as a purchase. The operating results of PSMC have been included in the Company's consolidated statement of operations from June 20, 2000.

The Company's growth in recent years has also been affected by the rapid technological changes taking place in the semiconductor industry resulting in a greater mix of high-end photomask requirements for more complex integrated circuit designs. In 1999 and early 2000, the Company experienced a weakness in selling prices for more mature technologies, but experienced an increase in unit volumes and a better mix of orders for high-end technology products. During the latter half of 2001, the Company was impacted by the severe and rapid downturn in the semiconductor industry which resulted in decreased demand and increased competitive pressures. The Company cannot predict the duration of such cyclical industry conditions or their impact on its future operating results.

Both revenues and costs have been affected by the increased demand for high-end technology photomasks that require more advanced manufacturing capabilities but generally command higher average selling prices. To meet the technological demands of its customers and position the Company for future growth, the Company continues to make substantial investments in high-end manufacturing capability both at existing and new facilities. The Company's capital expenditures for new facilities and equipment to support its customers' requirements for high technology products exceeded \$175 million for the three years ended October 31, 2001, resulting in significant increases in operating expenses. Based on the anticipated technological changes in the industry, the Company expects these trends to continue.

The Company believes that changes in photomask demand reflect changes in semiconductor design activity and are only indirectly affected by changes in semiconductor sales volumes. In the past, increased design activity has been stimulated by both the rapid development of new generation semiconductor designs and the proliferation of application-specific integrated circuits.

Results of Operations

The following table represents selected operating information expressed as a percentage of net sales:

	Years Emded				
	October 31, 2001	October 31, 2000	October 31, 1999		
Net sales	100.0%	100.0%	100.0%		
Cost of sales	67.3	66.6	69.7		
Gross margin	32.7	33.4	30.3		
Selling, general and administrative expenses	14.2	13.9	14.5		
Research and development expenses	6.6	6.3	6.0		
Operating income before consolidation, restructuring, and related charges	<u>11.9</u> %	<u>13.2</u> %	9.8%		

Net Sales

Net sales for the fiscal year ended October 31, 2001 increased 14.1% to \$378.0 million, compared to \$331.2 million in 2000, as a result of our continued global expansion. By geographic area, the growth in net sales was primarily attributed to Asia where net sales increased \$39.3 million or 123.0%. European sales increased \$5.6 million or 9.5% and North American sales increased \$1.9 million or 0.8%. Other factors contributing to the increased sales during 2001 include an improved sales mix of high-end technology products, which have higher average selling prices and increased unit volume associated with increased design releases. These increases were primarily experienced during the first half of the year. During the latter half of 2001, the Company experienced a slow-down in new design releases for mature and high-end technology products and increased competitive pricing pressures for photomasks as a result of the rapid downturn in the global semiconductor industry. The Company continues to see weaknesses in selling prices for mature technologies but has benefited from its investments in high-end manufacturing capability and increased global presence.

Net sales for the fiscal year ended October 31, 2000, increased 19.4% to \$331.2 million, compared to \$277.4 million in 1999. The increase was primarily attributable to an improved sales mix of high-end technology products which have higher average selling prices, increased unit volume associated with increased design releases and continued global expansion of the Company's manufacturing network.

Gross Margin

Gross margin for the year ended October 31, 2001 decreased to 32.7% from 33.4% for the year ended October 31, 2000. The decrease in 2001 was primarily attributable to the rapid downturn in the semiconductor industry which affected the Company during the last six months of 2001. During the first half of 2001 the Company's gross margin was 36.0% as a result of a greater mix of higher margin products and higher utilization of the Company's fixed equipment base. During the second half of 2001 the Company's gross margin decreased to 29.0% as a result of the decreased demand and reduced utilization of the Company's fixed equipment base. The decreased demand was somewhat mitigated by efficiencies realized from the Company's 2001 consolidation plan. Additionally, improved gross margins at the Company's subsidiary in Taiwan were partially offset by lower margins from the Company's newly acquired Korean subsidiary.

Gross margin for the year ended October 31, 2000 increased to 33.4% compared to 30.3% in 1999 principally because of improved absorption of fixed costs from higher sales, a greater mix of high-end technology products, increased capacity utilization associated with increased unit volumes, and efficiencies realized from the Company's 2000 restructuring. The increase was partially mitigated by lower gross margins at the Company's subsidiary in Taiwan.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the year ended October 31, 2001 increased 16.7% to \$53.8 million, or 14.2% of net sales, from \$46.1 million, or 13.9% of net sales for the year ended

October 31, 2000. The increase in 2001 was primarily attributable to the Company's continued global expansion, both domestically and internationally, including additional costs associated with our Asian investments, and the increased information technology and data communication costs associated with our global network.

Selling, general and administrative expenses increased 14.8% during fiscal year 2000 to \$46.1 million, or 13.9% of net sales, compared with \$40.1 million, or 14.5% of net sales in fiscal year 1999. The higher expenses were due principally to increased staffing and other support costs associated with the Company's continued global expansion, including the costs incurred in Taiwan and growth of the Company's communication and information technology infrastructure.

Research and Development

Research and development expenses for the year ended October 31, 2001, increased 19.9% to \$24.9 million, or 6.6% of net sales, from \$20.7 million, or 6.3% of net sales in 2000. The increase in fiscal year 2001 is attributable to the continuing development efforts of high-end process technologies for advanced, sub wavelength reticle solutions, primarily in the United States and Taiwan, and in Next Generation Lithography (NGL) applications.

Research and development expenses for the year ended October 31, 2000, increased by 24.8% to \$20.7 million, or 6.3% of net sales, from \$16.6 million or 6.0% of net sales in 1999. This increase reflects the continuing development of the Company's proprietary process technologies such as Nano Range II and Ultra Res, and its advanced, more complex photomasks such as phase shift, optical proximity correction and NGL applications.

Consolidation, Restructuring and Related Charges

In April 2001, the Company initiated a plan ("the consolidation plan") to consolidate its global photomask manufacturing network in order to increase capacity utilization and manufacturing efficiencies, as well as to accelerate the expansion of its world-class technology development. The Company initiated the consolidation plan as the final phase of its June 2000 merger with Align-Rite. Total consolidation and related charges associated with this plan of \$38.1 million were recorded in the second quarter of 2001. Of the total charge, \$30.6 million related to the consolidation plan and \$7.5 million related to the impairment of intangible assets.

The significant components of the consolidation plan included the closing of the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida and Heilbronn, Germany. The Company anticipates that the closing of these facilities will maximize capacity utilization at its remaining facilities. As part of the plan, the Company reduced its work force by approximately 120 employees.

The consolidation charge of \$30.6 million includes: \$4.0 million of cash charges for severance benefits for terminated employees paid during their entitlement periods, principally during the fourth quarter of 2001; \$4.5 million for facilities closings and lease termination costs expended over the projected lease terms; and non-cash charges of \$22.1 million that approximate the carrying value of fixed assets that are primarily associated with the consolidation plan based upon their expected disposition. Through October 31, 2001 cash charges of approximately \$3.0 million had been expended.

The charges also included \$7.5 million that were related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had any future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

During March 2000, the Company implemented a plan to restructure its mature products group in order to increase capacity utilization, manufacturing efficiencies and customer service activities worldwide. Total charges associated with this restructuring plan of \$17.5 million were recorded in the second quarter of 2000. Of the total charge, \$9.1 million related to restructuring and \$8.4 million related to the impairment of intangible assets.

The significant components of the restructuring plan included the closing of the Company's Sunnyvale, California and Neuchatel, Switzerland manufacturing facilities and the consolidation and regionalization of sales and customer service functions. As part of the plan, the Company reduced its work force by approximately 125 employees. The restructuring charge of \$9.1 million includes \$1.5 million of cash charges for severance benefits paid to terminated employees which was disbursed over their entitlement period and \$2.3 million for facilities closings and lease termination costs expended through the first quarter of 2001. Additionally, non-cash charges of \$5.3 million approximated the carrying value primarily of fixed assets associated with the manufacturing restructuring based upon their expected disposition. Such assets, consisting principally of specialized manufacturing tools and equipment, were subsequently taken out of service.

The charge also included \$8.4 million related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

Other Income and Expense

Interest expense for the year ended October 31, 2001 increased by \$0.9 million to \$12.0 million as compared to \$11.1 million for 2000. The increase is primarily the result of additional borrowings associated with the Company's investments in Asia, partially offset by lower effective borrowing rates. Investment and other income, net, during 2001 decreased by \$3.1 million to \$2.7 million as compared to \$5.8 million in 2000 primarily because there were no investment sales in 2001.

For the year ended October 31, 2000, interest expenses increased by \$3.4 million to \$11.1 million. The increased expense is associated with additional borrowings, principally associated with the PSMC acquisition. Investment and other income, net, increased by \$2.4 million to \$5.8 million as a result of increased gains on investment sales.

Income Taxes

For the year ended October 31, 2001 the Company recorded a tax benefit of \$3.0 million or 42.7% of the pretax loss. The loss was a result of the Company's consolidation plan charge, which primarily impacted U.S. tax rates.

The Company provided federal, state and foreign income taxes at a combined effective annual tax rate of 31.6% in 2000, compared to 36.6% in 1999. The lower rate in 2000 was primarily due to higher income in countries where the Company has government granted tax exemptions, together with higher research and development and other tax credits.

Minority Interest in Consolidated Subsidiaries

The minority interest charge of \$4.7 million in fiscal 2001 and \$0.6 million in fiscal 2000, reflects the portion of income attributable to the minority shareholders of the Company's non-wholly owned subsidiaries in Asia.

Net Income (Loss) and Earnings (Loss) Per Share

For the year ended October 31, 2001 the Company incurred a net loss of \$4.0 million or (\$0.13) per diluted share compared to net income of \$10.2 million or \$0.34 per diluted share in fiscal 2000. Net income, excluding the effects of consolidation, restructuring and related charges for 2001 and 2000, decreased to \$22.1 million or \$0.74 per diluted share in fiscal 2001 compared to \$25.0 million or \$0.86 per diluted share for fiscal 2000.

Net income for the year ended October 31, 2000, decreased to \$10.2 million, or \$0.34 per diluted share, compared to \$14.4 million, or \$0.51 per diluted share in 1999. Fiscal year 2000 includes the effect of the consolidation, restructuring and related charges amounting to \$14.8 million after tax, or \$0.52 per diluted share.

Liquidity and Capital Resources

The Company's working capital at October 31, 2001 was \$48.7 million compared with \$78.4 million at October 31, 2000. The decrease in working capital is primarily associated with increased short-term debt of the Company's new majority-owned subsidiary in Korea. Cash and cash equivalents at October 31, 2001 were \$34.7 million compared to \$38.2 million at October 31, 2000. Cash provided by operating activities for the year ended October 31, 2001 was \$113.6 million compared to \$49.6 million for the year ended October 31, 2000. The increase is primarily related to increased accounts payable and accruals of \$9.9 million, increased depreciation and amortization of \$16.1 million and increased net income from operations, exclusive of consolidation, restructuring and related charges of \$6.4 million.

Cash used by investing activities of \$98.6 million consisted principally of the acquisition of a majority share of PKL in Korea together with capital equipment purchases. The Company expects capital expenditures for 2002 to be approximately \$125.0 million. Capital expenditures for 2002 will be used primarily to continue to expand the Company's high-end technical capability.

Cash used in financing activities of \$17.0 million consisted principally of \$24.8 million of net repayments of borrowings, partially offset by proceeds of \$7.8 million from the issuance of common stock.

The Company's commitments represent investments in additional manufacturing capacity as well as advanced equipment for the production of high-end, more complex photomasks. At October 31, 2001, the Company had commitments outstanding for capital expenditures of approximately \$81 million. Additional commitments for capital requirements are expected to be incurred during fiscal 2002. At October 31, 2001 the Company was not in compliance with the convenant in its \$125 million revolving credit agreement that required a defined minimum interest coverage ratio for a trailing four-quarter period. At October 31, 2001 the Company had \$58.3 million outstanding under the revolving credit agreement. On December 12, 2001 the Company sold \$200 million of 4.75% Convertible Subordinated Notes due 2006 ("Notes") in a private offering pursuant to SEC Rule 144A. The Notes are convertible into the Company's common stock at a conversion price of \$37.00 per share. Total net proceeds from the issuance amounted to approximately \$193.5 million. Concurrent with the issuance of Notes, on December 12, 2001 the Company repaid all of the outstanding borrowings under the revolving credit agreement which amounted to \$57.7 million and terminated the agreement. The Company intends to obtain a new revolving credit agreement during 2002, although there can be no assurance that it will be successful. The Company believes that its currently available resources, together with its capacity for substantial growth and its accessibility to other debt and equity financing sources, are sufficient to satisfy its cash requirements for the foreseeable future.

Effect of New Accounting Standards

In June 2001 the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 142, "Goodwill and Other Intangible Assets." The Company will adopt this new standard beginning November 1, 2001. With the adoption of SFAS No. 142, goodwill is no longer subject to amortization over its estimated useful life, but will be subject to an annual assessment for impairment by applying a fair-value-based test. The Company anticipates that the adoption of this new standard will result in the discontinuation of annual goodwill amortization of approximately \$1.5 million in 2002.

In October 2001, the FASB issued SFAS No. 144 "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 becomes effective for the Company's financial statements issued for fiscal year 2003. The Company does not expect the pronouncement to have a material impact on its consolidated financial position, consolidated results of operations or consolidated cash flows.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company records derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives are reported in the Statement of Operations or as Accumulated Other Comprehensive Income (Loss), a separate component of Shareholders' Equity, depending on the use of the derivatives and whether they qualify for hedge accounting. In order to qualify for hedge accounting, the derivative must be highly effective in achieving offsetting changes in fair value or cash flows of the hedged items during the term of the hedge. In general, the types of risks hedged are those relating to the variability of future cash flows caused by movements in foreign currency exchange rates. The Company documents its risk management strategy and hedge effectiveness at the inception of and during the term of each hedge.

In fiscal year 2001, the Company entered into forward currency contracts to hedge transactions to purchase equipment to be settled in Japanese Yen. Such derivatives have been designated and qualify as cash flow hedging instruments and are reported at fair value. The Company has not recognized any net gains or losses from its forward currency contracts, as these hedges are highly effective, and the forecasted purchase of equipment will occur within 12 months. Therefore, any gains or losses are included in Accumulated Other Comprehensive Income (Loss) and will be amortized as a charge to earnings over the life of the related equipment. Cash flow hedges of forecasted transactions resulted in an aggregate debit balance of \$431,000 in Accumulated Other Comprehensive Income (Loss) at October 31, 2001. All forecasted transactions currently being hedged are expected to occur within 12 months.

Foreign Currency Exchange Rate Risk

The Company conducts business in several major international currencies through its worldwide operations and is subject to changes in foreign exchange rates of such currencies. Changes in exchange rates can positively or negatively affect the Company's sales, gross margins and retained earnings. The Company attempts to minimize currency exposure risk by producing its products in the same country or region in which the products are sold and thereby generating revenues and incurring expenses in the same currency and by managing its working capital; there can be no assurance that this approach will be successful, especially in the event of a significant and sudden decline in the value of any of the international currencies of the Company's worldwide operations. The Company does not engage in purchasing forward exchange contracts for speculative purposes.

Interest Rate Risk

The majority of the Company's borrowings are in the form of its convertible subordinated notes, which bear interest rates ranging from 4.75% to 6.0% and secured notes payable which bear interest between approximately 4.5% and 7.3%. The Company does not expect changes in interest rates to have a material effect on income or cash flows in 2002, although there can be no assurances that interest rates will not change significantly.

Forward Looking Information

Certain statements in this report are considered "forward looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. All forward-looking statements involve risks and uncertainties. In particular, any statement contained in this Annual Report on Form 10-K, in press releases, written statements or other documents filed with the Securities and Exchange Commission, or in the Company's communications and discussions with investors and analysts in the normal course of business through meetings, phone calls and conference calls, regarding the consummation and benefits of future acquisitions, expectations with respect to future sales, financial performance, operating efficiencies and product expansion, are subject to known and unknown risks, uncertainties and contingencies, many of which are beyond the control of the Company. These factors may cause actual results, performance or achievements to differ materially from anticipated results, performances or achievements. Factors that might affect such forward looking statements include, but are not limited to, overall economic and business conditions; the demand and receipt of orders for the Company's products; competitive factors in the industries and geographic markets in which the Company competes; changes in federal, state and foreign tax requirements (including tax rate changes, new tax laws and revised tax law interpretations); the Company's ability to place new equipment in service on a timely basis; interest rate fluctuations and other capital market conditions, including foreign currency rate fluctuations; economic and political conditions in international markets; the ability to obtain a new bank facility or other financings; the ability to achieve anticipated synergies and other cost savings in connection with acquisitions and productivity programs; the timing, impact and other uncertainties of future acquisitions; the seasonal and cyclical nature of the semiconductor industry; the availability of capital; management changes; damage or destruction to our facilities by natural disasters, labor strikes, political unrest or terrorist activity; the ability to fully utilize its tools; the ability of the Company to receive desired yields, pricing, product mix, and market acceptance of its products; and changes in technology. Any forward-looking statements should be considered in light of these factors.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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INDEPENDENT AUDITORS' REPORT

Board of Directors and Shareholders Photronics, Inc. Jupiter, Florida

We have audited the accompanying consolidated balance sheets of Photronics, Inc. and subsidiaries as of October 31, 2001 and 2000, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended October 31, 2001. 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 auditing standards generally accepted in the United States of America. 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 Photronics, Inc. and subsidiaries as of October 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended October 31, 2001, in conformity with accounting principles generally accepted in the United States of America.

DELOITTE & TOUCHE LLP

Hartford, Connecticut December 7, 2001, (December 12, 2001 as to Note 17)

PHOTRONICS, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEET

(in thousands, except share amounts)

	October 31, 2001	October 31, 2000
ASSETS		
Current assets: Cash and cash equivalents	\$ 34,684	\$ 38,182
\$1,000 in 2001 and \$880 in 2000) Inventories Deferred income taxes Other current assets	70,704 21,492 20,052 4,464	64,019 18,486 8,610 4,711
Total current assets	151,396	134,008
Property, plant and equipment, net Intangible assets, net Deferred income taxes Investments and other assets	402,776 93,199 12,840 13,327 \$673,538	395,281 59,277 10,996 16,410 \$615,972
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities: Current portion of long-term debt and notes payable Accounts payable Accrued salaries and wages Interest payable Income taxes payable Restructuring and other accrued liabilities Total current liabilities	\$ 33,918 37,142 6,443 3,386 7,092 14,683 102,664	\$ 849 37,917 5,264 2,720 3,037 5,828 55,615
Long-term debt Deferred income taxes Other liabilities Total liabilities Minority interest Commitments and contingencies	188,021 38,190 12,492 341,367 45,010	202,797 33,292 3,162 294,866 27,126
Shareholders' equity: Preferred stock, \$0.01 par value, 2,000 shares authorized, none issued and outstanding Common stock, \$0.01 par value, 75,000 shares authorized, 30,276 shares issued and outstanding at October 31, 2001 and 29,688 shares issued and outstanding at October 31, 2000	— 303	 297
Additional paid-in capital Retained earnings Accumulated other comprehensive loss Deferred compensation on restricted stock Total shareholders' equity	146,378 163,220 (22,740) ————————————————————————————————————	136,445 167,246 (9,877) (131) 293,980 \$615,972

CONSOLIDATED STATEMENT OF OPERATIONS

(in thousands, except per share amounts)

	Years Ended			
	October 31, 2001	October 31, 2000	October 31, 1999	
Net sales	\$377,969	\$331,212	\$277,395	
Costs and expenses:				
Cost of sales	254,272	220,650	193,467	
Selling, general and administrative	53,758	46,059	40,119	
Research and development	24,858	20,731	16,611	
Consolidation, restructuring and related charges	38,100	23,000		
Operating income	6,981	20,772	27,198	
Other income (expense):				
Interest expense	(11,966)	(11,091)	(7,731)	
Investment and other income, net	2,664	<u>5,783</u>	3,335	
Income (loss) before provision (benefit) for income				
taxes and minority interest	(2,321)	15,464	22,802	
Income tax provision (benefit)	(3,000)	4,700	8,354	
Income before minority interest	679	10,764	14,448	
Minority interest in income of consolidated				
subsidiaries	(4,705)	(588)		
Net income (loss)	<u>\$ (4,026)</u>	<u>\$ 10,176</u>	<u>\$ 14,448</u>	
Earnings (loss) per share:				
Basic	\$ (0.13)	\$ 0.35	\$ 0.52	
Diluted	<u>\$ (0.13)</u>	\$ 0.34	\$ 0.51	
Weighted average number of common shares outstanding:				
Basic	29,919	28,761	27,800	
Diluted	<u>29,919</u>	29,831	<u>28,105</u>	

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY YEARS ENDED OCTOBER 31, 2001, 2000 AND 1999

(in thousands)

Α	4-7 (741	
Accumula	tea Vine	er e
C	T	(T)
Comprehensive	income	(Loss)

					Comp	renensive	income (Lo	DSS)	- A 1	
		on Stock Amount	Add'l Paid-In Capital	Retained Earnings	Unrealized Investment Gains	Cash Flow Hedges	Foreign Currency Translation	Total	Deferred Compensation on Restricted Stock	Total Share- holders' Equity
Balance at November 1, 1998		\$280	\$100,973	\$138,885	\$ 1,167		\$ (2,970)	\$ (1,803		\$238,196
Comprehensive Income: Net income			_	14,448		_			_	14,448
period from April 1, 1998 to September 30, 1998 Change in unrealized gains		_	_	3,596	_		_	_		3,596
on investments Foreign currency translation	_	_	_	_	1,357	_	_	1,357	_	1,357
adjustment		_=					(2,125)	(2,125		(2,125)
Total comprehensive income (loss)				18,044	1,357		(2,125)	(768)	17,276
Sale of common stock through employee stock option and purchase plans	467	4	5,466	_		_		_	_	5,470
to compensation expense Common stock repurchases	(500)	$\frac{-}{(5)}$	(6,895)		_		_	_	88	88 (6,900)
Balance at October 31, 1999		279	99,544	156,929	2,524		(5,095)	(2,571	(51)	254,130
Comprehensive Income: Net income		_	_	10,176		_		_	_	10,176
on investments		_	_	_	2,776	_	_	2,776	_	2,776
Rite's results for the period from October 1, 1999 to				1.41						1.41
October 31, 1999 Foreign currency translation	_	_	_	141			(10.093)	(10.000		141
adjustment							(10,082)	(10,082)		_(10,082)
(loss)	_	_		10,317	2,776	_	(10,082)	(7,306)) —	3,011
private placement Sale of common stock through employee stock option and	1,000	10	21,831		_	_	_	_		21,841
purchase plans	763	8	14,809		_		_	_		14,817
amortization to compensation expense			261	_			_	_	(80)	181
Balance at October 31, 2000 Comprehensive Income:	29,688	297	136,445	167,246	5,300		(15,177)	(9,877)	(131)	293,980
Net income (loss) Change in unrealized gains	_	_	_	(4,026)	_		_		_	(4,026)
on investments		_			(2,318)			(2,318)) —	(2,318)
flow hedges						(431)	_	(431)	-	(431)
adjustment						_=	(10,114)	(10,114)		(10,114)
Total comprehensive income (loss)			_	(4,026)	(2,318)	(431)	(10,114)	(12,863)) —	(16,889)
employee stock option and purchase plans	588	6	9,933	_	_	_	_		_	9,939
Amortization of restricted stock to compensation expense									131	131
Balance at October 31, 2001	30,276	\$303	\$146,378	\$163,220	\$ 2,982	\$(431)	\$(25,291)	\$(22,740)		\$287,161

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

(in thousands)

	Years Ended		
	October 31, 2001	October 31, 2000	October 31, 1999
Cash flows from operating activities:			
Net income (loss)	\$ (4,026)	\$ 10,176	\$ 14,448
Adjustments to reconcile net income (loss)			
to net cash provided by operating activities:			
Depreciation and amortization of property,			
plant and equipment	67,502	53,322	45,015
Amortization of intangible assets	5,473	3,546	2,783
Gain on sale of investments	-	(6,430)	(1,479)
Deferred income taxes	(6,031)	1,251	8,104
Restructuring and related charges	38,100	17,500	
Other	(631)	2,398	387
Changes in assets and liabilities,			
net of effects of acquisitions:	(205)	(0.504)	(10.004)
Accounts receivable	(205)	(3,591)	(12,084)
Inventories	1,353	596	(109)
Other current assets	2,276	(1,171)	(1,910)
Accounts payable and accrued liabilities	9,768	(28,009)	9,852
Net cash provided by operating activities	113,579	49,588	65,007
Cash flows from investing activities:			
Acquisitions of and investments in photomask			
operations, net of cash acquired	(48,864)	(37,312)	(13,525)
Deposits on and purchases of property,			
plant and equipment	(48,670)	(43,599)	(83,719)
Net change in short-term investments			7,532
Proceeds from sale of investments	(4.006)	6,706	1,578
Other	(1,026)	(135)	_(7,817)
Net cash used in investing activities	(98,560)	(74,340)	(95,951)
Cash flows from financing activities:			
Net borrowings (repayments) of long-term debt	(24,828)	10,376	27,971
Proceeds from issuance of common stock	7,765	32,424	5,084
Purchase and retirement of common stock	_	_	(6,900)
Other	52		(201)
Net cash provided by (used in) financing activities	(17,011)	42,800	25,954
Effect of exchange rate changes on cash	(1,506)	493	101
Net increase (decrease) in cash and cash equivalents.	(3,498)	18,541	(4,889)
Cash and cash equivalents at beginning of year	38,182	23,115	29,364
Adjustment related to Align-Rite's net cash flows	,	•	•
resulting from differences in fiscal reporting periods	_	(3,474)	(1,360)
Cash and cash equivalents at end of year	\$ 34,684	\$ 38,182	\$ 23,115
Sans and additioned as and or Jan			=======================================

See accompanying notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS Years Ended October 31, 2001, 2000 and 1999 (in thousands, except per share amounts)

NOTE 1 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The accompanying Consolidated Financial Statements include the accounts of Photronics, Inc. and its majority-owned subsidiaries ("Photronics" or "Company"), in which the Company exercises control. All significant intercompany balances and transactions have been eliminated. Certain prior year amounts have been reclassified to conform to the current year presentation.

Cash and Cash Equivalents

Cash and cash equivalents include cash and highly liquid investments purchased with an original maturity of three months or less. The carrying values approximate fair value based on the short maturity of the instruments.

Derivative Investments and Hedging Activities

The Company records derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives are reported in the Statement of Operations or as Accumulated Other Comprehensive Income (Loss), a separate component of Shareholders' Equity, depending on the use of the derivatives and whether they qualify for hedge accounting. In order to qualify for hedge accounting, the derivative must be highly effective in achieving offsetting changes in fair value or cash flows of the hedged items during the term of the hedge.

Investments

The Company's equity investments are classified as available-for-sale, and carried at fair value. Unrealized gains and losses, net of tax, are reported as other comprehensive income (loss) as a separate component of shareholders' equity. Gains and losses are included in income when realized, determined based on the disposition of specifically identified investments.

Inventories

Inventories, principally raw materials, are stated at the lower of cost, determined under the first-in, first-out (FIFO) method, or market.

Long-Lived Assets

Property, plant and equipment are recorded at cost less accumulated depreciation. Repairs and maintenance as well as renewals and replacements of a routine nature are charged to operations as incurred, while those which improve or extend the lives of existing assets are capitalized. Upon sale or other disposition, the cost of the asset and accumulated depreciation are eliminated from the accounts, and any resulting gain or loss is reflected in income.

For financial reporting purposes, depreciation and amortization are computed on the straight-line method over the estimated useful lives of the related assets. Buildings and improvements are depreciated over 15 to 40 years, machinery and equipment over 3 to 10 years and furniture, fixtures and office equipment over 3 to 5 years. Leasehold improvements are amortized over the life of the lease or the estimated useful life of the improvement, whichever is less.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Intangible Assets

Intangible assets consist primarily of goodwill and other acquisition-related intangibles, and software development costs. These assets are stated at fair value as of the date incurred less accumulated amortization. Amortization is calculated on a straight-line basis over estimated useful lives of 3 to 15 years for goodwill and acquisition-related assets, and over 5 years for software development costs. The future economic benefit of the carrying value of all intangible assets is reviewed periodically and any diminution in useful life or impairment in value based on future anticipated undiscounted cash flows would be recorded in the period so determined.

In June 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 142, "Goodwill and Other Intangible Assets." The Company will adopt this new standard beginning November 1, 2001. With the adoption of SFAS No. 142, goodwill is no longer subject to amortization over its estimated useful life, but will be subject to an annual assessment for impairment by applying a fair-value-based test. The Company anticipates that the adoption of this new standard will result in the discontinuation of annual goodwill amortization of approximately \$1.5 million in 2002.

Income Taxes

The provision for income taxes is computed on the basis of consolidated financial statement income. Deferred income taxes reflect the tax effects of differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes.

Earnings Per Share

Basic EPS is based on the weighted average number of common shares outstanding for the period, excluding any dilutive common share equivalents. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted.

Stock Based Compensation

The Company records stock option awards in accordance with the provisions of Accounting Principles Board Opinion 25, "Accounting for Stock Issued to Employees." The Company estimates the fair value of stock option awards in accordance with SFAS No. 123, "Accounting for Stock-Based Compensation," and discloses the resulting estimated compensation effect on net income on a pro forma basis.

Foreign Currency Translation

The Company's foreign subsidiaries maintain their accounts in their respective local currencies. Assets and liabilities of such subsidiaries are translated to U.S. dollars at year-end exchange rates. Income and expenses are translated at average rates of exchange prevailing during the year. Foreign currency translation adjustments are accumulated and reported as other comprehensive income (loss) as a separate component of shareholders' equity. The effects of changes in exchange rates on foreign currency transactions are included in income.

Revenue Recognition

The Company recognizes revenue upon shipment of goods to customers.

NOTE 2 — BUSINESS COMBINATIONS

Acquisition of PKL Ltd.

In 2001 the Company completed the acquisition of a majority of the total share capital (approximately 51%) of PKL Ltd. ("PKL"), a photomask manufacturer based in Korea for approximately

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

\$56 million. The acquisition was accounted for as a purchase in accordance with SFAS No. 141 "Business Combinations." Accordingly, a portion of the purchase price has been allocated to assets acquired and liabilities assumed based upon estimated fair value at the date of acquisition, while the balance of \$38.6 million was recorded as goodwill. The purchase price allocation is preliminary and further refinements are likely to be made upon the completion of the final valuation. The operating results of PKL have been included in the Consolidated Statement of Operations from August 27, 2001, the date the Company acquired majority share. Pursuant to an agreement with certain shareholders of PKL, the Company may acquire an additional 1,000,000 shares, or approximately 32%, of PKL.

The following table presents unaudited consolidated pro forma information as if the acquisition of PKL had occurred as of the beginning of the periods presented:

	Years Ended		
	October 31, 2001	October 31, 2000	
Net sales	\$416,274	\$378,386	
Net income (loss)	\$ (2,021)	\$ 12,479	
Diluted earnings (loss) per share	\$ (0.07)	\$ 0.42	

In management's opinion, these unaudited consolidated pro forma amounts are not necessarily indicative of what the actual combined results of operations might have been had the acquisition of PKL occurred at the beginning of the periods presented.

The purchase price of approximately \$56 million was allocated to the net assets acquired based on estimates of their fair values at the date of the acquisition which included current assets of \$22.8 million, property, plant, equipment and other assets of \$54.3 million, current liabilities of \$37.8 million (including \$33.8 million of currently payable debt) and long-term debt of \$5.0 million.

Acquisition of PSMC

Effective June 20, 2000, the Company acquired a majority of the total share capital of Precision Semiconductor Mask Corporation (PSMC), a photomask manufacturer based in Taiwan, for approximately \$63.4 million. The acquisition was accounted for as a purchase. Accordingly, a portion of the purchase price has been allocated to assets acquired and liabilities assumed based upon estimated fair value at the date of acquisition, while the balance of \$31.2 million was recorded as goodwill. The operating results of PSMC have been included in the Consolidated Statement of Operations from the date of acquisition.

The following table presents unaudited consolidated pro forma information as if the acquisition of PSMC had occurred as of the beginning of the periods presented:

	Years Ended		
	October 31, 2000	October 31, 1999	
Net sales	\$343,248	\$292,246	
Net income	\$ 6,508	\$ 5,735	
Diluted earnings per share	\$ 0.22	\$ 0.20	

In management's opinion, these unaudited consolidated pro forma amounts are not necessarily indicative of what the actual combined results of operations might have been if the acquisition of PSMC had been effective at the beginning of the periods presented.

Align-Rite Merger

On June 7, 2000, Photronics completed its merger with Align-Rite International, Inc. ("Align-Rite"). Under the terms of the merger agreement, each of the 4,731,232 shares of common stock of Align-Rite

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

issued and outstanding as of June 7, 2000 was converted into .85 shares of common stock of Photronics. Cash was paid in lieu of the issuance of any fractional shares of Photronics that would otherwise have been issued. Any stock options to acquire Align-Rite common stock that had not been exercised as of June 7, 2000 became fully vested options to acquire Photronics common stock in accordance with the Merger Agreement. The merger constituted a tax-free reorganization and has been accounted for as a pooling-of-interests. Accordingly, the consolidated financial statements for each of the two years ended October 31, 2000 and 1999 and the accompanying notes thereto reflect the Company's financial position, results of operations and cash flows as if Align-Rite had been a wholly-owned subsidiary of Photronics for all periods presented. Prior to the merger, Align-Rite's fiscal year ended on March 31.

The Company recorded a pre-tax charge of approximately \$5.5 million for transaction costs incurred in connection with the merger. Such costs consisted primarily of fees for investment bankers, attorneys, accountants, financial printing and other related charges.

NOTE 3 — INVESTMENTS

There were no short-term investments at October 31, 2001 or 2000.

Investments primarily consist of available-for-sale equity securities of publicly traded technology companies. The fair values of available-for-sale investments are based upon quoted market prices. For investments with no quoted market price, the estimated fair value is based upon the financial condition and the operating results and projections of the investee and is considered to approximate cost. Unrealized gains on investments were determined as follows:

	October 31, 2001	October 31, 2000
Fair value	\$6,658	\$12,797
Cost	1,851	4,249
	4,807	8,548
Less deferred income taxes	1,825	3,248
Net unrealized gains	\$2,982	\$ 5,300

NOTE 4 — PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consists of the following:

	2001	2000
Land	\$ 3,129	\$ 4,438
Buildings and improvements	32,090	45,701
Machinery and equipment	602,790	529,237
Leasehold improvements	20,331	14,801
Furniture, fixtures and office equipment	35,596	32,530
	693,936	626,707
Less accumulated depreciation and amortization	291,160	231,426
	\$402,776	\$395,281

October 31

October 31

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

NOTE 5 — INTANGIBLE ASSETS

Intangible Assets consist of the following:

	October 31, 2001	October 31, 2000
Goodwill	\$ 89,687	\$52,220
Software development costs	11,984	11,984
Other	5,033	<u>4,446</u>
	106,704	68,650
Less accumulated amortization	13,505	9,373
	\$ 93,199	<u>\$59,277</u>
NOTE 6 — LONG-TERM DEBT		
Long-term debt consists of the following:		
	October 31, 2001	October 31, 2000
Borrowings under revolving credit facilities		
Borrowings under revolving credit facilities	2001	
5	\$ 58,311	\$ 68,675
6% Convertible Subordinated Notes due June 1, 2004	\$ 58,311	\$ 68,675
6% Convertible Subordinated Notes due June 1, 2004 Debt of non-wholly owned subsidiaries:	\$ 58,311 103,300	\$ 68,675
6% Convertible Subordinated Notes due June 1, 2004 Debt of non-wholly owned subsidiaries: 10.7% Bond Payable, due October 2002	\$ 58,311 103,300 11,613	\$ 68,675 103,400
6% Convertible Subordinated Notes due June 1, 2004 Debt of non-wholly owned subsidiaries: 10.7% Bond Payable, due October 2002	\$ 58,311 103,300 11,613 35,677	2000 \$ 68,675 103,400 31,144
6% Convertible Subordinated Notes due June 1, 2004 Debt of non-wholly owned subsidiaries: 10.7% Bond Payable, due October 2002	\$ 58,311 103,300 11,613 35,677 260	2000 \$ 68,675 103,400 31,144 427

Long-term debt matures as follows: 2003 — \$8,463; 2004 — \$163,871; 2005 — \$2,687 and 2006 — \$13,000. The fair value of long-term debt not yet substantively extinguished is estimated based on the current rates offered to the Company and is not significantly different from carrying value, except that the fair value of the convertible subordinated notes, based upon the most recently reported trade as of October 31, 2001, amounted to \$110.9 million.

At October 31, 2001 the Company had an unsecured revolving credit facility to provide for borrowings of up to \$125 million at any time through November 2003. The Company is charged a commitment fee on the average unused amount of the available credit. The effective interest rate for fiscal 2001 was approximately 6.3%. The revolving credit facility was amended on June 12, 2001, in order to modify certain financial covenants and definitions in connection with the Company's consolidation plan. The Company was subject to compliance with and maintenance of certain financial covenants and ratios set forth in the credit facility, as amended. At October 31, 2001, the Company was not in compliance with the revolving credit facility's minimum interest coverage ratio. On December 12, 2001, the Company repaid all of the outstanding borrowings under that facility which amounted to \$57.7 million and terminated the facility. The Company has classified the revolving credit facility as a long-term liability as it has the intent and ability to refinance or replace this obligation with other long-term debt (see Note 17).

On May 29, 1997, the Company sold \$103.5 million of convertible subordinated notes, due in 2004, in a public offering. The notes bear interest at 6% per annum and are convertible at any time by the holders into 3.7 million shares of the Company's common stock, at a conversion price of \$27.97 per share. The notes are redeemable at the Company's option, in whole or in part, at certain premiums decreasing through the maturity date. Interest is payable semi-annually.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The 10.7% bond payable and secured notes payable are obligations of non-wholly owned subsidiaries and are not guaranteed by the Company. Secured notes payable consist primarily of collaterized equipment loans with interest rates ranging from approximately 4.5% to 7.3% and are repayable in monthly installments through May 2006.

Cash paid for interest amounted to \$11,006, \$11,724 and \$7,123 in 2001, 2000 and 1999, respectively.

NOTE 7 — EARNINGS PER SHARE

A reconciliation of basic and diluted EPS follows:

A reconciliation of basic and diluted LT 5 follows.			. .
	Net Income (Loss)	Average Shares Outstanding	Earnings (Loss) Per Share
2001:			
Basic	\$(4,026)	29,919	\$(0.13)
Effect of potential dilution from exercise of stock			
options			_
Diluted	<u>\$(4,026)</u>	29,919	<u>\$(0.13)</u>
2000:			
Basic	\$10,176	28,761	\$ 0.35
Effect of potential dilution from exercise of stock			
options		1,070	_
Diluted	\$10,176	29,831	\$ 0.34
			<u></u>
1999:			
Basic	\$14,448	27,800	\$ 0.52
Effect of potential dilution from exercise of stock			
options		<u>305</u>	_
Diluted	\$14,448	28,105	\$ 0.51

The effect of the potential conversion of notes into 3.7 million shares of common stock would be anti-dilutive for all years presented. If the assumed conversion of convertible subordinated notes and stock options had been dilutive, the incremental additional shares outstanding would have been 4,453 in 2001, 3,700 in 2000 and 4,185 in 1999.

NOTE 8 — INCOME TAXES

The provision (benefit) for income taxes consists of the following:

	2001	2000_	1999
Current:			
Federal	\$ 619	\$1,344	\$ (774)
State	127	54	205
Foreign	2,285	2,051	819
	3,031	3,449	250
Deferred:			
Federal	(7,078)	1,498	6,935
State	(913)	(12)	786
Foreign	1,960	_(235)	383
	(6,031)	1,251	8,104
	\$(3,000)	\$4,700	\$8,354

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The provision (benefit) for income taxes differs from the amount computed by applying the statutory U.S. Federal income tax rate to income before taxes as a result of the following:

	2001	2000	1999
U.S. Federal income tax at statutory rate of 35%	\$ (810)	\$5,413	\$7,981
State income taxes, net of federal benefit	(770)	23	965
Other, net	_(1,420)	<u>(736</u>)	_(592)
	\$(3,000)	\$4,700	\$8,354

The Company's net deferred income tax liability consists of the following:

	October 31, 2001	October 31, 2000
Deferred income tax assets:		
Reserves not currently deductible	\$ 3,653	\$ 2,516
Net operating losses	14,585	1,889
Tax credit carry forwards	3,614	1,114
Intercompany transactions	5,105	3,295
Intangible amortization	3,362	1,589
Non qualified stock options	956	23
Other	1,617	<u>9,180</u>
Total deferred income tax asset	<u>\$32,892</u>	<u>\$19,606</u>
Deferred income tax liabilities:		
Property, plant and equipment	31,551	24,902
Investments	1,825	3,248
Research and development costs	948	1,297
Other	3,866	3,845
Total deferred income tax liability	\$38,190 	<u>\$33,292</u>
Net deferred income tax liability	\$ 5,298	\$13,686

Cash paid for income taxes amounted to \$2.0 million, \$0.9 million and \$2.9 million in 2001, 2000 and 1999 respectively.

The Company has a net operating loss carryover to 2002 totaling \$35.2 million, of which \$5.0 million expires in 2020 and \$30.2 million expires in 2021. The Company expects to fully utilize these carryforwards, thus a deferred income tax asset has been established.

Deferred income taxes of approximately \$23.6 million at October 31, 2001 were not provided on undistributed earnings of foreign subsidiaries because such undistributed earnings are expected to be reinvested indefinitely.

The Company records a deferred tax benefit from the exercise of non-qualified stock options as an addition to additional paid in capital.

NOTE 9 — EMPLOYEE STOCK PURCHASE AND OPTION PLANS

In 2000, the shareholders approved the adoption of the 2000 Stock Option Plan which includes provisions allowing for the award of qualified and non-qualified stock options and the granting of restricted stock awards. A total of one million shares of common stock may be issued pursuant to options

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

or restricted stock awards granted under the Plan. Restricted stock awards do not require the payment of any cash consideration by the recipient, but shares subject to an award may be forfeited unless conditions specified in the grant are satisfied.

The Company has previously adopted other stock option plans under which incentive and non-qualified stock options and restricted stock awards may be granted. All plans provide that the exercise price may not be less than the fair market value of the common stock at the date the options are granted and limit the term of options granted to a maximum of ten years.

The following table summarizes stock option activity for each of the three years ended October 31, 2001 under the plans:

	Stock Options	Exercise Prices
Balance at November 1, 1998	3,056,242	\$ 0.94 - \$31.44
Granted	359,106	11.91 - 25.88
Exercised	(430,660)	0.94 - 21.97
Cancelled	(156,488)	0.94 - 31.44
Balance at October 31, 1999	2,828,200	\$ 0.94 - \$31.44
Granted	848,281	22.13 - 27.88
Exercised	(646,464)	0.94 - 22.38
Cancelled	(236,351)	3.08 - 31.44
Balance at October 31, 2000	2,793,666	\$ 0.94 - \$31.44
Granted	352,950	16.12 - 27.34
Exercised	(428,092)	0.94 - 31.44
Cancelled	(131,287)	11.00 - 31.44
Balance at October 31, 2001	2,587,237	

The following table summarizes information concerning currently outstanding and exercisable options as of October 31, 2001:

	Range of Exercise Prices		
	\$0.94 - 10.00	\$10.00 - 20.00	\$20.00 - 31.44
Outstanding:			
Number of options	330,264	1,001,383	1,255,590
Weighted average remaining years	3.2	6.5	8.1
Weighted average exercise price	\$ 4.61	\$ 13.72	\$ 23.26
Exercisable:			
Number of options	330,264	677,171	404,385
Weighted average exercise price	\$ 4.61	\$ 12.88	\$ 23.14

At October 31, 2001, 592,225 shares were available for grant and 1,411,820 shares were exercisable at a weighted average exercise price of \$13.88.

The Company has not recognized compensation expense in connection with stock option grants under the plans. However, had compensation expense been determined based on the fair value of the options on the grant dates, the Company's pro forma net (loss) income and earnings (loss) per share would have been increased by approximately \$(0.4) million, or \$(0.01) per diluted share in 2001, by approximately \$1.4 million, or \$0.05 per diluted share in 2000, and by approximately \$2.7 million, or \$0.10 per diluted share in 1999. The weighted average fair value of options granted was \$18.66 per share in 2001, \$23.76 per share in 2000 and \$17.52 per share in 1999. Fair value is estimated based on the Black-Scholes

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

option-pricing model with the following weighted average assumptions: dividend yield of 0%; expected volatility of 75.2% in 2001, 68.8% in 2000, and 67.1% in 1999; and risk-free interest rates of 6.0% in 2001, 7.5% in 2000 and 6.2% in 1999.

The Company maintains an Employee Stock Purchase Plan ("Purchase Plan"), under which 600,000 shares of common stock were reserved for issuance. The Purchase Plan enables eligible employees to subscribe, through payroll deductions, to purchase shares of the Company's common stock at a purchase price equal to 85% of the lower of the fair market value on the commencement date of the offering and the last day of the payroll payment period. At October 31, 2001, 151,246 shares had been issued and 62,131 shares were subject to outstanding subscriptions under the Purchase Plan.

NOTE 10 - EMPLOYEE BENEFIT PLANS

The Company maintains a 401(k) Savings and Profit-Sharing Plan (the "Plan") which covers all domestic employees who have completed six months of service and are eighteen years of age or older. Under the terms of the Plan, an employee may contribute up to 15% of their compensation, which will be matched by the Company at 50% of the employee's contributions, which are not in excess of 4% of the employee's compensation. Employee and employer contributions vest fully upon contribution. Employer contributions amounted to \$0.9 million in 2001, \$0.9 million in 2000, and \$0.6 million in 1999.

The Company maintains a cafeteria plan to provide eligible domestic employees with the option to receive non-taxable medical, dental, disability and life insurance benefits. The cafeteria plan is offered to all active full-time domestic employees and their qualifying dependents. The Company's contribution amounted to \$5.7 million in 2001, \$5.4 million in 2000 and \$4.5 million in 1999.

The Company's foreign subsidiaries maintain benefit plans for their employees, which vary by country. The obligations and cost of these plans are not significant to the Company.

NOTE 11 - LEASES

The Company leases various real estate and equipment under non-cancelable operating leases. Rental expense under such leases amounted to \$1.6 million in 2001, \$2.2 million in 2000 and \$4.9 million in 1999.

Future minimum lease payments under non-cancelable operating leases with initial or remaining terms in excess of one year amounted to \$8.3 million at October 31, 2001, as follows:

2002	\$1,473	2005	\$1,288
2003	\$1,337	2006	\$1,204
2004	\$1,266	Thereafter	\$1,773

NOTE 12 — COMMITMENTS AND CONTINGENCIES

At October 31, 2001 the Company had capital expenditure purchase commitments outstanding of approximately \$81 million. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions, including collectibility of accounts receivable, depreciable lives and recoverability of property, plant and equipment, intangible assets and certain accrued liabilities. Actual results may differ from such estimates.

Financial instruments that potentially subject the Company to credit risk consist principally of trade receivables and temporary cash investments. The Company sells its products primarily to manufacturers in the semiconductor and computer industries in North America, Europe and Asia. The Company believes that the concentration of credit risk in its trade receivables is substantially mitigated by the

Company's ongoing credit evaluation process and relatively short collection terms. The Company does not generally require collateral from customers. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information. Historically, the Company has not incurred any significant credit-related losses.

In fiscal year 2001, the Company entered into forward currency contracts to hedge transactions to purchase equipment to be settled in Japanese Yen. Such derivatives have been designated and qualify as cash flow hedging instruments and are reported at fair value. The Company has not recognized any net gains or losses from its forward currency contracts, as these hedges are highly effective, and the forecasted purchase of equipment will occur within 12 months. Therefore, any gains or losses are included in Accumulated Other Comprehensive Income (Loss) and will be amortized as a charge to earnings over the life of the related equipment. Cash flow hedges of forecasted transactions resulted in an aggregate debit balance of \$431,000 in Accumulated Other Comprehensive Income (Loss) at October 31, 2001. All forecasted transactions currently being hedged are expected to occur within 12 months.

NOTE 13 — SEGMENT INFORMATION

The Company operates in a single industry segment as a manufacturer of photomasks, which are high precision quartz plates containing microscopic images of electronic circuits for use in the fabrication of semiconductors. In addition to its manufacturing facilities in the United States, the Company has operations in the United Kingdom, Germany, Switzerland, Singapore, Taiwan, and Korea. The Company's 2001, 2000 and 1999 net sales, operating income (loss) and identifiable assets by geographic area were as follows:

	Net Sales	Operating Income (Loss)	Identifiable Assets
2001:			
North America	\$241,873	\$(12,980)	\$345,546
Europe	64,809	7,905	94,818
Asia	71,287	12,056	233,174
	\$377,969	\$ 6,981	<u>\$673,538</u>
2000:			
North America	\$240,013	\$ 9,599	\$423,926
Europe	59,211	7,143	93,727
Asia	31,988	<u>4,030</u>	98,319
	\$331,212	\$ 20,772	\$615,972
1999:			•
North America	\$216,342	\$ 25,237	\$364,818
Europe	48,403	3,746	107,522
Asia	12,650	(1,785)	29,969
	<u>\$277,395</u>	<u>\$ 27,198</u>	\$502,309

Approximately 4% of net domestic sales in 2001 were for delivery outside of the United States (4% in 2000 and 5% in 1999).

During fiscal 2001 and 2000, no single customer accounted for more than 10% of the Company's net sales. In fiscal 1999, two customers each represented approximately 10% of total net sales.

NOTE 14 — COMPREHENSIVE INCOME (LOSS)

The Company's comprehensive income (loss) as reported in the Consolidated Statement of Shareholders' Equity, consists of net earnings (losses) and all changes in equity during a period except those resulting from investments by owners and distributions to owners, which are presented before-tax. The Company does not provide for U.S. income taxes on foreign currency translation adjustments. Accumulated other comprehensive income (loss) consists of unrealized gains and losses on certain investments in equity securities and foreign currency translation adjustments. The related tax effects allocated to each component of other comprehensive income (loss) were as follows for the three years ended October 31, 2001:

	Before-Tax Amount	Tax (Expense) or Benefit	Net-of-Tax Amount
2001:			
Foreign currency translation adjustment	\$(10,114)	<u>\$</u>	<u>\$(10,114</u>)
Loss on change in fair value of cash flow hedge Unrealized holding losses arising during the period	(431) (4,803)	2,485	(431) (2,318)
			
Other comprehensive loss	<u>\$(15,348)</u>	<u>\$ 2,485</u>	<u>\$(12,863)</u>
2000:			
Foreign currency translation adjustment	\$(10,082)	\$ —	\$(10,082)
Unrealized gains on investments:			
Unrealized holding gains arising during the period	10,499	(3,318)	7,181
Less: reclassification adjustment for gains realized in net			
income	<u>(6,430</u>)	2,025	(4,405)
Net unrealized gains	4,069	(1,293)	<u>2,776</u>
Other comprehensive loss	\$ (6,013)	\$(1,293)	<u>\$ (7,306)</u>
4000			
1999:	A (A 10.5)	•	A (A 1 A B)
Foreign currency translation adjustment	<u>\$ (2,125)</u>	<u>\$</u>	<u>\$ (2,125)</u>
Unrealized gains on investments:			
Unrealized holding gains arising during the period	4,574	(1,738)	2,836
Less: reclassification adjustment for gains realized in net	(2.205)	. 007	(1.470)
income	(2,385)	906	(1,479)
Net unrealized gains	2,189	<u>(832</u>)	1,357
Other comprehensive income (loss)	<u>\$ 64</u>	<u>\$ (832)</u>	<u>\$ (768)</u>

NOTE 15 — CONSOLIDATION, RESTRUCTURING AND RELATED CHARGES

In April 2001, the Company initiated a plan ("the consolidation plan") to consolidate its global photomask manufacturing network in order to increase capacity utilization and manufacturing efficiencies, as well as to accelerate the expansion of its world-class technology development. The Company initiated the consolidation plan as the final phase of its June 2000 merger with Align-Rite. Total consolidation and related charges associated with this plan of \$38.1 million were recorded in the second quarter of 2001. Of the total charge, \$30.6 million related to the consolidation plan and \$7.5 million related to the impairment of intangible assets.

The significant components of the consolidation plan included the closing of the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida and Heilbronn, Germany. The Company anticipates that the closing of these facilities will maximize capacity utilization at its remaining facilities. As part of the plan, the Company reduced its work force by approximately 120 employees.

The consolidation charge of \$30.6 million includes: \$4.0 million of cash charges for severance benefits for terminated employees paid during their entitlement periods, principally during the fourth quarter of 2001; \$4.5 million for facilities closings and lease termination costs expended over the projected lease terms; and non-cash charges of \$22.1 million that approximate the carrying value of fixed assets that are primarily associated with the consolidation plan based upon their expected disposition. Through October 31, 2001 cash charges of approximately \$3.0 million had been expended.

The charges also included \$7.5 million that were related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had any future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

During March 2000, the Company implemented a plan to restructure its mature products group in order to increase capacity utilization, manufacturing efficiencies and customer service activities worldwide. Total charges associated with this restructuring plan of \$17.5 million were recorded in the second quarter of 2000. Of the total charge, \$9.1 million related to restructuring and \$8.4 million related to the impairment of intangible assets.

The significant components of the restructuring plan included the closing of the Company's Sunnyvale, California and Neuchatel, Switzerland manufacturing facilities and the consolidation and regionalization of sales and customer service functions. As part of the plan, the Company reduced its work force by approximately 125 employees. The restructuring charge of \$9.1 million includes \$1.5 million of cash charges for severance benefits paid to terminated employees which was disbursed over their entitlement period and \$2.3 million for facilities closings and lease termination costs expended through the first quarter of 2001. Additionally, non-cash charges of \$5.3 million approximated the carrying value primarily of fixed assets associated with the manufacturing restructuring based upon their expected disposition. Such assets, consisting principally of specialized manufacturing tools and equipment, were subsequently taken out of service.

The charge also included \$8.4 million related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

NOTE 16 — QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)

The following table sets forth certain unaudited quarterly financial data:

	First	_Second_	Third	Fourth	Year
2001:					(a)
Net sales	\$98,557	\$100,572	\$85,016	\$93,824	\$377,969
Gross margin	35,328	36,337	24,447	27,585	123,697
Net income (loss)	8,402	(16,191)	1,777	1,986	(4,026)
Earnings (loss) per share:	•				
Basic	\$ 0.28	\$ (0.54)	\$ 0.06	\$ 0.07	\$ (0.13)
Diluted	\$ 0.28	\$ (0.54)	\$ 0.06	\$ 0.07	\$ (0.13)
2000:					(b)
Net sales	\$72,585	\$ 76,360	\$85,595	\$96,672	\$331,212
Gross margin	22,250	25,228	28,919	34,165	110,562
Net income (loss)	3,531	(5,302)	3,158	8,789	10,176
Earnings (loss) per share:					
Basic	\$ 0.13	\$ (0.19)	\$ 0.11	\$ 0.30	\$ 0.35
Diluted	\$ 0.13	\$ (0.19)	\$ 0.11	\$ 0.29	\$ 0.34

⁽a) Includes consolidation charges of \$38.1 million (\$26.1 million after tax, or \$0.87 per diluted share), recorded in the second quarter, in connection with the final phase of the Company's merger with Align-Rite International, Inc. and subsequent consolidation of facilities in California, Florida and Germany.

NOTE 17 — SUBSEQUENT EVENT

At October 31, 2001, the Company was not in compliance with the covenant in its \$125 million revolving credit agreement that required a defined minimum interest coverage ratio for a trailing four-quarter period. At October 31, 2001 the Company had \$58.3 million outstanding under the revolving credit agreement. On December 12, 2001 the Company sold \$200 million of 4.75% Convertible Subordinated Notes due 2006 ("Notes") in a private offering pursuant to SEC Rule 144A. The Notes are convertible into the Company's common stock at a conversion price of \$37.00 per share. Net proceeds from the issuance amounted to approximately \$193.5 million. Concurrent with the issuance of the Notes, on December 12, 2001 the Company repaid all of the outstanding borrowings under the Revolving Credit Agreement which amounted to \$57.7 million and terminated the agreement. The Company intends to obtain a new revolving credit agreement during 2002.

⁽b) Includes restructuring and related charges, recorded in the second quarter, incurred in connection with the closure of the Company's Sunnyvale, California and Neuchatel, Switzerland facilities and merger related expenses, recorded in the third quarter, totaling \$14.8 million (after tax) or \$0.52 per share.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no disagreements on any accounting and financial disclosure matters between the Company and its independent certified public accountants for which a Form 8-K was required to be filed during the 24 months ended October 31, 2001 or for the period from October 31, 2001 to the date hereof.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information as to Directors required by Item 401 and 405 of Regulation S-K is set forth in the Company's definitive proxy statement (the "Definitive Proxy Statement") which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Form 10-K under the caption "ELECTION OF DIRECTORS" and is incorporated herein by reference. The information as to Executive Officers is included in Part I, Item 1A of this report under the caption "Executive Officers."

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 402 of Regulation S-K is set forth in the Definitive Proxy Statement under the captions "EXECUTIVE COMPENSATION" and "DIRECTORS' COMPENSATION" and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by Item 403 of Regulation S-K is set forth in the Definitive Proxy Statement under the caption "OWNERSHIP OF COMMON STOCK BY DIRECTORS, NOMINEES, OFFICERS AND CERTAIN BENEFICIAL OWNERS" and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by Item 404 of Regulation S-K is set forth in the Definitive Proxy Statement under the caption "CERTAIN TRANSACTIONS" and is incorporated herein by reference.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(A) The following documents are filed as part of this report:

1) Financial Statements

Independent Auditors' Reports

Consolidated Balance Sheet at October 31, 2001 and 2000

Consolidated Statement of Operations for the years ended October 31, 2001, 2000 and 1999

Consolidated Statement of Shareholders' Equity for the years ended October 31, 2001, 2000 and 1999

Consolidated Statement of Cash Flows for the years ended October 31, 2001, 2000 and 1999

Notes to Consolidated Financial Statements

2) Financial Statement Schedules

Schedules for which provision is made in Regulation S-X of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted.

3) Exhibits: See Exhibits Index.

(B) Reports on Form 8-K

No reports on Form 8-K were filed by the Company during the fourth quarter ended October 31, 2001.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PHOTRONICS, INC. (Registrant)

January 24, 2002

By ROBERT J. BOLLO

Robert J. Bollo Senior Vice President Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Ву	CONSTANTINE S. MACRICOSTAS Constantine S. Macricostas Chief Executive Officer and Chairman of the Board	January 24, 2002
Ву	ROBERT J. BOLLO Robert J. Bollo Senior Vice President Chief Financial Officer	January 24, 2002
Ву	SEAN T. SMITH Sean T. Smith Vice President Controller	January 24, 2002
Ву	WALTER M. FIEDEROWICZ Walter M. Fiederowicz Director	January 24, 2002
Ву	JOSEPH A. FIORITA, JR. Joseph A. Fiorita, Jr. Director	January 24, 2002
Ву	MICHAEL J. YOMAZZO Michael J. Yomazzo Director	January 24, 2002

EXHIBITS INDEX

Exhibit Number	Description
3.1	Certificate of Incorporation. (1)
3.2	By-Laws, as amended. (1)
3.3	Amendment to Certificate of Incorporation, dated March 16, 1990. (3)
3.4	Amendment to Certificate of Incorporation, dated March 16, 1995. (10)
3.5	Amendment to Certificate of Incorporation, dated November 13, 1997. (13)
4.1	Form of Stock Certificate. (1)
4.2	Form of Indenture between the Company and The Bank of Nova Scotia Trust Company of New York, as Trustee, relating to the 4-3/4% Convertible Subordinated Notes due December 15, 2006. *
4.3	Registration Rights Agreement, dated December 12, 2001 between the Company, Morgan Stanley & Co. Incorporated and Merrill Lynch, Pierce, Fenner and Smith. *
4.4	Form of Indenture between The Chase Manhattan Bank, as Trustee, and the Company relating to the 6% Convertible Subordinated Notes due June 1, 2004. (12)
10.1	Loan Agreement, dated August 10, 1984, among the Company, Fairfield Associates, and the Connecticut Development Authority. (1)
10.2	Indenture of Trust, dated August 10, 1984, between the Connecticut Development Authority and Citytrust. (1)
10.3	Security Agreement dated August 10, 1984, between the Company and the Connecticut Development Authority, with assignment to Citytrust, as Trustee. (1)
10.4	Lease Agreement, dated August 10, 1984, between the Company and Fairfield Associates. (1)
10.5	Guaranty Agreement, dated August 10, 1984, by the Company and Constantine Macricostas to Citytrust, as Trustee. (1)
10.6	Assumption Agreement between the Company, MC2 and the Connecticut Development Authority, dated October 15, 1992, and related Note, Mortgage and Collateral Assignment of Leases and amendments thereto. (6)
10.7	Assumption Agreement, Third Amendment to Loan Agreement and Amendment to Guaranty Photronics Labs Incorporated Project — 1984 Series, dated August 28, 1992, by and among Photronics California, Inc., Photronics Financial Services, Inc., Photronics Investment Services, Inc., Photronics Texas, Inc., the Company, Constantine Macricostas, the Connecticut Development Authority, The Chase Manhattan Bank of Connecticut, N.A. and Fairfield Associates. (6)
10.8	Amendment to Security Agreements, dated October 31, 1988, by and among the Company, Citytrust, Constantine S. Macricostas and Mayo Associates. (8)
10.9	Amendment to Loan Agreements between the Company and the Connecticut Development Authority, dated as of June 8, 1990. (3)
10.10	Second Amendment to Loan Agreement dated as of December 20, 1991 by and among the Company, the Connecticut Development Authority and The Chase Manhattan Bank of Connecticut, N.A. (4)

Exhibit Number	Description
10.11	Lease dated as of November 1, 1989 between the Company, MC3, Inc. and Alpha-Omega Associates. (8)
10.12	The Company's 1992 Stock Option Plan. (5) +
10.13	The Company's 1992 Employee Stock Purchase Plan. (5)
10.14	The Company's 1994 Employee Stock Option Plan. (7) +
10.15	The Company's 1996 Stock Option Plan. (11) +
10.16	The Company's 1998 Stock Option Plan. (14) +
10.17	The Company's 2000 Stock Option Plan filed as Appendix A to the Company's Notice of Annual Meeting and Proxy Statement dated April 4, 2000 is incorporated herein by reference. +
10.18	Form of Agreement regarding Life Insurance between the Company and each of Messrs. Macricostas and Bollo. (9) +
10.19	Consulting Agreement between the Company and Michael J. Yomazzo, dated October 10, 1997. (13) +
10.20	Consulting Agreement between the Company and Constantine S. Macricostas, dated October 10, 1997. (13) +
10.21	Employment Agreement dated July 17, 2000 between the Company and Robert J. Bollo. +
10.22	Put/Call Option Agreement dated August 21, 2001, by and among Photronics, Inc., Photo (L) Limited, Mask (L) Limited, Lakeway (L) Limited, The HSBC Private Equity Fund 2 Limited, The HSBC Private Equity Fund, L.P., Taiwan Mask Corp. and Blue Water Ventures International Ltd. filed as Exhibit 10 to the Company's quarterly report on Form 10-Q for the quarter ended July 31, 2001 is incorporated herein by reference.
10.23	Severance Agreement dated December 5, 2001, between the Company and James L. Mac Donald. * +
21	List of Subsidiaries. *
23	Consent of Deloitte & Touche LLP. *

^{*} Filed herewith.

⁺ Represents a management contract or compensatory plan or arrangement required to be filed as an exhibit to this form pursuant to item 14(c) of this report.

⁽¹⁾ Filed as an exhibit to the Company's Registration Statement on Form S-1, File Number 33-11694, which was declared effective by the Commission on March 10, 1987, and incorporated herein by reference.

⁽²⁾ Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-17530, which was declared effective on October 19, 1987, and incorporated herein by reference.

⁽³⁾ Filed as an exhibit to the Company's Registration Statement on Form S-2, File Number 33-34772 which was declared effective by the Commission on June 22, 1990, and incorporated herein by reference.

⁽⁴⁾ Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1991 and incorporated herein by reference.

- (5) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-47446, which was filed on April 24, 1992, and incorporated herein by reference.
- (6) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1992, and incorporated herein by reference.
- (7) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-78102, which was filed on April 22, 1994, and incorporated herein by reference.
- (8) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1993, and incorporated herein by reference.
- (9) Filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 31, 1995, and incorporated herein by reference.
- (10) Filed as an exhibit to the Company's Current Report on Form 8-K, dated March 24, 1995, and incorporated herein by reference.
- (11) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 333-02245, which was filed on April 4, 1996, and incorporated herein by reference.
- (12) Filed as an exhibit to the Company's Registration Statement on Form S-3, File Number 333-26009, which was declared effective by the Commission on May 22, 1997, and incorporated herein by reference.
- (13) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended November 2, 1997, and incorporated herein by reference.
- (14) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 333-50809, which was filed on April 23, 1998, and incorporated herein by reference.

COPIES OF EXHIBITS WILL BE PROVIDED TO SHAREHOLDERS UPON REQUEST.