

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

DIVISION OF CORPORATION FINANCE

March 16, 2012

<u>Via E-mail</u> Mr. Richard J. Gaynor Chief Financial Officer GT Advanced Technologies Inc. 243 Daniel Webster Highway Merrimack, New Hampshire 03054

> Re: GT Advanced Technologies Inc. Form 10-K for the year ended April 2, 2011 Filed May 25, 2011 File No. 001-34133

Dear Mr. Gaynor:

We have completed our review of your filings. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filings and the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States. We urge all persons who are responsible for the accuracy and adequacy of the disclosures in the filings to be certain that the filings include the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Martin James

Martin James Senior Assistant Chief Accountant