



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

DIVISION OF
CORPORATION FINANCE

January 31, 2014

Via E-mail

Helene Simonet
Principal Financial and
Accounting Officer
Coherent, Inc.
5100 Patrick Henry Drive
Santa Clara, California 95054

**Re: Coherent, Inc.
Form 10-K for the Fiscal Year Ended September 28, 2013
Filed November 27, 2013
File No. 001-33962**

Dear Ms. Simonet:

We have reviewed your filing and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to this comment, we may have additional comments.

Form 10-K for the Fiscal Year Ended September 28, 2013

Financial Statements

Note 18. Segment and Geographic Information, page 102

1. We note the discussion of your major markets on page 10 and the breakout of net sales by market application in Management's Discussion and Analysis on page 42. Please tell us how you determined that you only have two reportable operating segments, SLS and CLC, under FASB ASC 280-10-50. Your response should address the following:
 - Describe the contents of the information you provide to your chief operating decision maker.

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- Explain your disclosure that the segmentation reflects the go-to-market strategies for various products and markets.
- Tell us whether you are aggregating any operating segments to determine your reportable segments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comment, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; 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.

You may contact Andri Boerman at (202) 551-3645 or me at (202) 551-3676 if you have questions regarding the comment on the financial statements and related matters. Please contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any other questions.

Sincerely,

/s/ Brian Cascio

Brian Cascio
Accounting Branch Chief