



DIVISION OF
CORPORATION FINANCE

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

July 16, 2013

Via E-mail

Chih-Hsiang (Thompson) Lin
President and Chief Executive Officer
Applied Optoelectronics, Inc.
13115 Jess Pirtle Blvd.
Sugar Land, TX 77478

**Re: Applied Optoelectronics, Inc.
Amendment No. 2 to
Draft Registration Statement on Form S-1
Submitted June 28, 2013
CIK No. 0001158114**

Dear Dr. Lin:

We have reviewed your amended draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Prospectus Summary, page 1

1. We note your revisions in response to prior comment 4; however, given the retained focus in your summary on detail regarding your markets and industry, it remains unclear what are your "fiber-optic networking solutions" and "optical communications ... components, subassemblies and modules" that you mention in the first paragraph of the overview. Please state clearly, directly and prominently without technical jargon what your products are and do, and relocate detail that is more appropriate for another section of your prospectus.

2. If your disclosure in the third paragraph of the overview about your leadership positions is based on sales data that excludes categories of products, please expand your disclosure to clarify the basis of your leadership claims. If the expanded disclosure is inappropriate for a prospectus summary, please relocate your leadership claims to a section of your document where you can provide sufficient explanation for investors to understand the basis for and limitations of your claims.
3. Although we are not objecting to your summary disclosure regarding your two largest customers, please address that part of comment 3 regarding relocation of the other disclosure in the first paragraph on page 2 and your statements about Amazon, Facebook, Google and Microsoft to a more appropriate section of your prospectus after your prospectus summary. In your relocated disclosure, please ensure that you have disclosed the criteria that you used to determine which entities to name, that you disclose all entities that satisfy those criteria, and that the extent of each identified entity's current contribution to your business is clear.
4. We note your responses to prior comments 2 and 4 regarding the \$2.2 billion "revenue opportunity" now mentioned on page 2. Please relocate such disclosure from the prospectus summary to a section of your document that appears after you have explained the results that you have achieved and the related risks. Also, if the \$2.2 million opportunity includes either (1) sales from products you do not offer, or (2) potential customers other than those who operate open system architectures that you say on page 87 you target, please tell us why you believe it is appropriate to claim a \$2.2 billion opportunity.

The Offering, page 7

5. Please reconcile your disclosure on pages 7-8 about the number and types of securities to be outstanding after the offering with your disclosure on page 128.

We are subject to governmental export and import controls, page 29

6. From your disclosure on pages 97-98 in response to prior comment 10, it remains unclear what controls would have the effects that you mention in this risk factor. Please revise or advise.

Use of Proceeds, page 39

7. It is unclear how your revised disclosure addresses the last sentence of prior comment 12. If you do not have a specific plan for a significant portion of the proceeds, please say so clearly in this section and disclose the principal reasons for the offering.

Factors affecting our performance, page 48

8. Given your responses to prior comments 5 and 16 and your disclosure that design wins are a key factor affecting your performance, it is unclear why you believe the disclosure in your prospectus provides sufficient information for investors to evaluate how the design wins affected your performance in the periods presented and what the design win trends are. Please advise or revise.

Comparison of the three months ended March 31, 2013 and March 31, 2012, page 55

9. Please disclose why your revenues from the CATV and FTTH markets declined in the three months ended March 31, 2013.

Gross margin, page 56

10. Please expand your response to prior comment 18 to clarify how you know that “gross margin was primarily the result of an unfavorable product mix” but you are unable to disclose to investors how or why the mix changed unfavorably. Also, please tell us whether any of the “product categories” disclosed on your web site contributed 15% or more of your consolidated revenue during any of the last three years.

Stock-Based Compensation, page 74

11. We refer to your response to prior comment 22. Please expand the first bullet point and the third bullet on page 74 to fully describe the factors you considered in concluding that equity transactions and a valuation from 2009 were relevant in estimating fair value for stock options granted in 2012.
12. We refer to your response to prior comment 23. Please expand your disclosure to describe why you believe the marketability discount and cost of capital assumptions are reasonable in your specific fact pattern. While we see that you have cited certain general and third party information in explaining the basis for the assumptions, the response does not describe how you determined that the final results are reasonable in your specific circumstances.
13. The consent from Adams Capital, Inc. refers to a report dated May 2, 2013. Tell us about the key assumptions and fair value determination from the May valuation. Also, tell us whether you have granted equity compensation after the date of that study and tell us the per share fair value used in valuing those grants, if any.

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Long-lived assets, page 77

14. We note your response to prior comment 21. We may have further comments after you file as an exhibit the consent of the appraiser mentioned in the second paragraph of this section.

Principal and Selling Stockholders, page 124

15. Your response to prior comment 30 appears to indicate that you intend that your CEO will be a 6% beneficial owner upon completion of the offering but your intend to include a beneficial ownership table in your prospectus that discloses his ownership to be less than 1.5% upon completion of this offering. It is unclear why you believe such disclosure is appropriate given Regulation S-K Item 403 and Rule 408. Please advise or revise.
16. Please tell us why you have not included Shiu-Mei Lin Chou, Yaun-Chung Hsu, Wei-Chien Wu and Yuanpin Hsu in the table on page 125. We note that you disclose on page 122 that these investors hold five percent or more of a class of your capital stock.

Exhibit 23.3 and 24.4

17. When you file your registration statement via EDGAR, please include the consents of Ovum, Inc. and Adams Capital, Inc. that expressly state that Ovum and Adams consent to the quotation and summarization of their research included in the registration statement.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

You may contact Praveen Kartholy, Staff Accountant, at (202) 551-3778 or Gary Todd, Accounting Reviewer, at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3617 with any other questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): Frank S. Wu, Esq.