

DLA Piper LLP (US)
1000 Louisiana Street, Suite 2800
Houston, Texas 77002-5005
www.dlapiper.com

Frank Wu
frank.wu@dlapiper.com
T 713.425.8446
F 713.300.6046

August 27, 2013

VIA EDGAR AND OVERNIGHT DELIVERY

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Attention: Russell Mancuso
Tom Jones
Praveen Kartholy
Gary Todd

Re: Applied Optoelectronics, Inc.
Registration Statement on Form S-1
Filed August 13, 2013
File No. 333-190591

Ladies and Gentlemen:

We are submitting this letter on behalf of Applied Optoelectronics, Inc. (the "**Company**") in response to comments from the staff (the "**Staff**") of the Securities and Exchange Commission (the "**Commission**") received by letter dated August 23, 2013 (the "**Staff Letter**") relating to the Company's Registration Statement filed on August 13, 2013 (the "**Registration Statement**").

Additionally, on behalf of the Company, we are supplementally providing with this letter a folder including materials in support of certain statements in the Registration Statement and in response to certain of the Staff's comments (the "**Supplemental Materials**"). We have included cross-references to the Supplemental Materials in this letter where appropriate. Because of the commercially sensitive nature of certain information contained in the Supplemental Materials, this submission is accompanied by the Company's request for confidential treatment for selected portions of the Supplemental Materials pursuant to Rule 83 of the Commission's Rules on Information and Requests, 17 C.F.R. § 200.83, and the Freedom of Information Act. Pursuant to Rule 418(b) of the Securities Act of 1933, as amended, the Company respectfully requests that the Staff return upon completion of its review each of the Supplemental Materials furnished to the Staff. The Company confirms to the Staff that the Supplemental Materials were not filed in electronic format.

In response to the comments set forth in the Staff Letter, the Company has revised the Registration Statement and, together with this response, is publicly filing a revised Registration Statement ("**Amendment No. 1**"). For the convenience of the Staff, we are providing by overnight delivery to the Staff a copy of this letter, four marked copies of Amendment No. 1 (against the Registration Statement, which was filed on August 13, 2013) and four copies of the Supplemental Materials.

The Company notes that the timing of the offering as described in the Company's letter dated August 15, 2013 has not changed and the Company would like to resolve any remaining comments at the

earliest possible date that is convenient for the Staff so that it can print the preliminary prospectus for the offering no later than September 5, 2013.

In this letter, we have recited the comments from the Staff Letter in italicized, bold type and followed each comment with the Company's response. Except as otherwise specifically indicated, page references in the Company's responses correspond to the page of the Registration Statement.

Prospectus Summary, page 1

- It does not appear that you responded to prior comment 3 about disclosure of customers in the first paragraph on page 2 other than your two largest customers. In this regard, we note that you continue to refer in that paragraph to Arris Group, Aurora Networks, Harmonic and Motorola Mobility Holdings. As we requested in prior comment 3, please relocate your disclosure of these companies to a more appropriate section of your prospectus after your prospectus summary where you disclose the extent of each identified entity's current contribution to your revenue.***

Response: The Company advises the Staff that the Company has relocated the disclosure about its sales to the five largest CATV OEMs to pages 47 and 80 of the Registration Statement. The Company is confidentially providing the Staff with information regarding the Company's sales to each of such five customers in 2012. Please refer to the materials attached as Annex A to the Supplemental Materials. The Company believes that it would suffer competitive harm if such detailed sales information is disclosed in the Registration Statement. However, the Company has added disclosure on pages 47 and 80 of the Registration Statement regarding the aggregate revenue from such five customers and the specific revenue from the one such customer that represented more than 10% of the Company's revenue in 2012.

2. ***We note your revision in response to prior comment 7. Please clarify the nature of the capital expenditures. Also disclose the approximate amount that you currently intend to use for the capital expenditures and the other uses of proceeds that you have added.***

Response: As the Company's public offering process has progressed, the Company has refined its planned use of proceeds and the Company now anticipates to use a portion of the proceeds to repay approximately \$13.0 million of its indebtedness and to spend approximately \$10.0 million on capital expenditures within the next twelve months to purchase equipment to support the manufacturing of its products and the development of its technology. The disclosure on pages 7 and 39 has been revised to reflect such plans.

Factors affecting our performance, page 48

3. ***We note that you removed design wins as a factor affecting your performance in response to prior comment 8. Given your disclosure about design wins and strengths in the sixth bullet point and first bullet point on pages 3 and 85, respectively, the disclosure in the second sentence on page 49 and the disclosure about your operating results and trends in the fourth and fifth bullet points on page 65, it remains 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.***

Response: The Company advises the Staff that it removed the design win paragraph under the heading "Factors affecting our performance" in response to the Staff's prior comment 8 in an attempt to deemphasize the importance of the concept of design wins as it relates to the Company's short-term financial performance. Although the Company believes that its ability to

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obtain design wins is a key strength and can provide meaningful and recurring revenue, an increase or decrease in the mere number of design wins does not necessarily correlate to a likely increase or decrease in revenue—particularly in the short term. As such, the Company believes that disclosure of the number of design wins on a quarterly or annual basis could be misleading to investors, as an investor would likely infer that an increase or decrease in design wins would result in a corresponding increase or decrease in revenue in the same or immediately succeeding quarter. In fact, the Company's experience is that some design wins result in significant revenue and some do not, and the timing of such revenue is difficult to predict as it depends on the success of the end customer's product that uses the Company's components. Thus, some design wins result in orders and significant revenue shortly after the design win is awarded and other design wins do not result in significant orders and revenue for several months or longer after the initial design win (if at all). The Company does believe that over a period of years the collective impact of design wins correlates to the Company's overall revenue growth. The Company also notes for the Staff that the term "design win" is commonly used in the Company's industry (and in other industries) and the Company believes that such concept is important to include in the Registration Statement. As a result of the foregoing considerations and in response to the Staff's comment, the Company has further reviewed its use of the term "design wins" in the Registration Statement and has removed the disclosure on page 3 and revised the disclosure on pages 49, 65 and 86. For further discussion of these issues, the Company refers the Staff to its responses to prior Comment 5 and prior Comment 16 in the Company's letter dated June 28, 2013.

Revenue, page 54

4. ***We note your response to prior comment 9. Please disclose why your revenues from the FTTH and other markets increased in the six months ended June 30, 2013.***

Response: The Company has revised the Registration Statement on page 55 to indicate the reason that revenues in the FTTH and other markets increased during the six month period.

Quarterly Results of Operations, page 62

5. ***Please clarify whether Adjusted EBITDA for the quarter ended March 31, 2013 is \$305,000 as disclosed on page 62 or \$350,000 as disclosed on page 63.***

Response: The Company has revised the Registration Statement on page 62 to reconcile Adjusted EBITDA.

Liquidity and Capital Resources, page 65

6. ***Please reconcile the financing activities discussion for the six months ended June 30, 2013 to the presentation on the face of the statement of cash flows. In that regard, based on the statement of cash flows, it appears that cash was provided by financing activities and that net borrowings increased rather than decreased.***

Response: The Company has revised the Registration Statement on page 67 to indicate that cash was provided by, rather than used by financing activities.

Stock-based compensation expense, page 73

7. ***We refer to the stock compensation analysis provided in your letter dated August 15, 2013. Please expand the disclosure in your filing to describe each significant factor contributing to the difference between the estimated offering price and the per share fair value used for purposes of measuring stock-based compensation for each grant date during the twelve months ended June 30, 2013. The disclosure should progressively bridge the changes in***

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per share fair values and describe intervening events and reasons for changes in assumptions.

Response: The Company has revised the Registration Statement on pages 75 and 76 to expand the disclosure concerning significant factors contributing to differences in fair value and the estimated offering price.

8. Please disclose the intrinsic value of outstanding stock options as of June 30, 2013 based on the expected offering price.

Response: The Company has revised the Registration Statement on pages 76 and 77 to indicate the intrinsic value of outstanding stock options as of June 30, 2013, and will complete the table when the Company inserts the expected offering price in the Registration Statement.

Overview, page 79

9. Your response to the last sentence of prior comment 3 does not address that comment fully. Please expand your statement regarding naming companies "based on revenues" to clarify whether you mean the revenue of the customer, your total revenue from the customer, or the portion of your revenue in the disclosed market from the named customer. Also, disclose all entities that satisfy the criteria that you used to determine which customers to name, and disclose the extent of each entity's current contribution to your revenue.

Response: The Company advises the Staff that the customers were selected based on the amount of revenue the Company realized from such customers. As such, the Company has revised the Registration Statement on pages 47 and 80 to identify the portion of the Company's total revenue derived from its key customers in the three identified markets and the Company has also identified that each of them are the Company's top customers in their respective markets based on revenue provided to the Company. The Company is confidentially providing the Staff with information regarding the Company's sales to each such customer identified in the Registration Statement. Please refer to the materials attached as Annex B to the Supplemental Materials.

Trends in the Internet Data Center Market, page 82

10. Please address the last sentence of prior comment 3 as it applies to the entities that you name in the second paragraph of this section.

Response: The disclosure on page 84 of the Registration Statement has been revised in response to the Staff's comment. Specifically, disclosure has been added describing why the Company references Amazon.com Inc., Facebook, Inc., Google Inc. and Microsoft Corporation. This disclosure is consistent with the Company's response to comment 3 of the Staff's original comment letter, as provided in the Company's letter to the Staff dated May 21, 2013.

Note C. Earnings Per Share, page F-15

11. Please show us how the \$2.33 net loss per share for the six months ended June 30, 2012 was determined.

Response: The amount reflected in the Registration Statement of \$2.33 per share was mistakenly included and gave effect to the reverse split of shares. The amended Registration Statement reflects a reverse split of 30-to-1, and now the indicated loss of \$2.33 per share is correct. The net loss per share on a post stock-split basis was calculated as follows:

Net loss for six months ended June 30, 2012 (in thousands): \$617

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Weighted average shares used to compute net loss per share as of June 30, 2012, as revised (on a post stock-split basis, in thousands): 265

Net loss per share: $\$617 / 265 = \2.33

Item 15. Recent Sales of Unregistered Securities, page II-2

12. Please reconcile your disclosures in Item 15 to the issuance of preferred stock in the second quarter of 2012 reflected by the changes on page F-7.

Response: The Company has revised the Registration Statement on Page II-2 to reconcile the disclosure in Item 15 and in those of F-7 to clarify that \$4.2 million was recorded (of which \$3.0 million was booked as a receivable) from the Series G private placement during the six-month period ending June 30, 2012. The \$3.0 million receivable was collected and the remaining proceeds from the private placement were later received during the second half of 2012. Furthermore, the Company has clarified that the second closing of the private placement occurred between May 25, 2012 and September 7, 2012.

Please direct any questions or comments regarding this letter or the Registration Statement to me at (713) 425-8446 or frank.wu@dlapiper.com.

Sincerely,
DLA Piper LLP (US)

/s/ Frank Wu
Frank Wu
Partner

cc: Chi-Hsiang (Thompson) Lin, Applied Optoelectronics, Inc.
James L. Dunn, Jr., Applied Optoelectronics, Inc.
David Kuo, Applied Optoelectronics, Inc.
Philip Russell, DLA Piper LLP (US)
Robert Suffoletta, Wilson Sonsini Goodrich & Rosati, P.C.

