



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 3030

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

March 4, 2010

VIA U.S. Mail and Facsimile (734) 998-3474

Robin Risser  
Advanced Photonix, Inc.  
2925 Boardwalk  
Ann Arbor, MI 48104

**Re:   Advanced Photonix, Inc.  
      Form 10-K for the fiscal year ended March 31, 2009  
      Filed June 29, 2009  
      Form 10-Q for the fiscal quarter ended December 25, 2009  
      File No. 1-11056**

Dear Mr. Risser:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and will make no further review of your documents. Where indicated, we think you should revise your future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the fiscal year ended March 31, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Summary of Contractual Obligations and Commitments, page 26

1. In future filings please provide a discussion of the nature and terms of significant purchase obligations, such as the \$1.3 million of purchase obligation at March 31, 2009.

Item 8. Financial Statements and Supplementary Data

Note 3. Inventories, page 41

2. We see that you present an allowance for inventory impairment as a deduction from the cost of gross total inventories. Tell us why the allowance should not be allocated to and netted with the individual components of inventory for purposes of this disclosure. We refer you to FASB ASC 330-10-35-14 and SAB Topic 5-BB, both of which indicate that inventory impairment charges establish a new cost basis for impaired inventory.
3. As a related matter, the accounting policy disclosure in Note 2 (page 36) also characterizes inventory impairment charges as establishing "reserves." As noted above, under FASB ASC 330-10-35-14 and SAB Topic 5-BB, inventory impairment charges establish a new cost basis for impaired inventory. Please tell us how your policy disclosure is consistent with the underlying accounting theory from the referenced guidance.

Note 5. Intangible Assets and Goodwill, page 42

4. In future filings please add clarifying disclosure to explain how you apply the cash flow method in estimating future intangible asset amortization. Please also explain in response to this comment.

Form 10-Q for the fiscal quarter ended December 31, 2009

Item 1. Financial Statements

Note 7. Stockholders' Equity, page 15

5. On page 16 you disclose that the inputs to determine the fair value of the derivative warrant liability is Level 2 in the fair value hierarchy. Please tell us how you determined that the derivative warrant valuation is Level 2 as opposed to

Level 3 in the fair value hierarchy. Please note that under FASB ASC 820-10-35-37 the level in the fair value hierarchy should be determined based upon the lowest level input that is significant to the fair value measurement in its entirety. We also refer you to FASB ASC 820-10-55-22 which states that a Level 3 input would include historical volatility.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Impairment of Long-Lived Assets, page 19

6. We note that in performing Step 1 of the annual goodwill impairment test you use your market capitalization plus a control premium to determine the fair value of your single reporting unit. You used a control premium of 25% at March 31, 2009 which you state is supported by recent transaction data in your industry. Please tell us the specific factors and rationale you used to determine a control premium of 25%. For example, this support could consider factors such as an evaluation of the control premiums you observed in comparable transactions or the cash flow associated with obtaining control of a reporting unit.
7. As a related matter, you state that there were no events or changes in circumstances since the end of fiscal year 2009 requiring an interim impairment analysis. However, we note that your revenues and operating cash flows have significantly declined and your losses have significantly increased during the first three quarters of fiscal 2010. Please tell us your basis for not reporting an interim impairment analysis subsequent to March 31, 2009. Refer to FASB ASC 350-20-35-30.

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As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

Robin Risser  
Advanced Photonix, Inc.  
March 4, 2010  
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In connection with responding to our comments, please provide, in writing, a 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Kristin Lochhead at (202) 551-3664 or me at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. In this regard, please do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676 with any other questions.

Sincerely,

Gary Todd  
Accounting Reviewer