



DIVISION OF  
CORPORATION FINANCE

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

July 15, 2010

Leonard Borow  
Chief Executive Officer and President  
Aeroflex Holding Corp.  
35 South Service Road  
P.O. Box 6022  
Plainview, NY 11803

**Re: Aeroflex Holding Corp.  
Amendment No. 3 to Form S-1  
Filed July 9, 2010  
File No. 333-165920**

Dear Mr. Borow:

We have reviewed your 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 amending your registration statement and providing the requested information. 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 any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

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1. Given that you have provided projections of net sales, operating income and Adjusted EBITDA for the fiscal year ended June 30, 2010, please also tell us why you have not included projected net income (loss) and earnings (loss) per share. Refer to Item 10(b)(2) of Regulation S-K.

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2. We note your response to prior comment 1. Since you completed the acquisitions of Willtek Communications and Radiation Assured Devices, and anticipate completing the acquisition of Advanced Control Components, after the date of your most recent financial statements included in your registration statement, please provide in this section of your prospectus sufficient disclosure regarding these acquisitions so that your investors can

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assess whether these acquisitions will materially affect your business, financial condition or results of operations.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

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You may contact Jeanne Bennett at (202) 551-3606 or Brian Cascio, Accounting Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Allicia Lam at (202) 551-3316 or Tim Buchmiller, Senior Attorney, at (202) 551-3635 with any other questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc (by facsimile): Michael R. Littenberg, Esq  
Schulte Roth & Zabel LLP