



DIVISION OF
CORPORATION FINANCE

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

November 16, 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. 6 to Form S-1
Filed November 10, 2010
File No. 333-165920**

Dear Mr. Borow:

We have reviewed your registration statement and have the following comment. 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 comment applies 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.

Capitalization, page 42

1. Please tell us how you reconciled the \$30.9 million you reduced stockholder's equity by with the individual components you list.

Transactions with Goldman, Sachs & Co. and its Affiliates, page 127

2. We see from Note 15 to your financial statements that in connection with an amendment to your senior secured credit facility you paid a \$3.3 million fee to the lenders. Please tell us why you have not disclosed this transaction as a related party transaction.

Exhibit 1.1

3. Given your disclosure that you will be a “controlled company,” please tell us how you will be able to make the representation contained in Section 1(xxxvi) of the Underwriting Agreement.

Exhibit 5.1

4. With reference to assumptions (a) through (f), inclusive, in the third paragraph of the opinion, it is inappropriate to shift the burden of these matters to investors if those matters could be readily ascertained through an officers’ certificate or otherwise. Please revise.
5. We note the portion of the fourth paragraph which states that “when an issuance of Shares has been duly authorized by all necessary corporate action of the Company....” Please note that the opinion that you file to satisfy your obligation per Regulation S-K Item 601(b)(5) may not assume conclusions of law that are necessary for the ultimate legal opinion. Please file a revised opinion.

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

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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.

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