



DIVISION OF
CORPORATION FINANCE

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

September 21, 2012

VIA E-mail

Feng-Ming Wang
Chief Executive Officer
c/o Ambarella Corporation
2975 San Ysidro Way
Santa Clara, CA 95051

**Re: Ambarella Inc.
Registration Statement on Form S-1
Amendment No. 3 filed September 13, 2012
File No. 333-174838**

Dear Mr. Wang:

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.

Prospectus Cover

1. Please clarify here and page 7 the proportion of shares to be sold by you and the selling shareholders pursuant to the over-allotment option. Also revise your disclosure on pages 43-44, as applicable.

Exhibit 5.1

2. We note the opinion filed as Exhibit 5.1 appears to only cover the shares to be sold by the company and does not cover the shares to be sold by the selling stockholders. Please file a revised opinion that covers all the securities to be sold by the selling stockholders.
3. We note the paragraph located after Section 2.4 that counsel has "not undertaken any further enquiry or due diligence in relation to the transaction..." Your counsel should review all documents necessary to deliver the opinion, rather than the limited number of

documents listed under paragraph 1. Please have your counsel revise their opinion to remove this limitation.

4. Please ask counsel to clarify why the assumption in paragraph 2.4 is necessary and appropriate given that it appears to assume in paragraph 3.2 that the shares will be sold and paid for in the manner described in the registration statement. Please note that it is inappropriate for counsel to assume that the shares will not be assessable.
5. We note the opinion in Section 3.4 states that the Cayman Islands tax disclosure in the prospectus is “accurate in all material respects.” Please ask counsel to provide a revised opinion that states the disclosure referenced in that section is the opinion of counsel, not merely being accurate in all material respects. Please refer to Section III.B.2 of Staff Legal Bulletin No. 19, available on our web site at <http://sec.gov/interps/legal/cfslb19.htm> Also, to the extent that counsel is providing its opinion regarding the tax matters you mention, please identify counsel in that section of the document, file the tax opinion as an exhibit and include counsel’s consent.
6. It is unclear why the qualifications contained in Section 4.1 and the following paragraph are necessary and appropriate. Please have your counsel remove such qualification or advise.

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.

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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.

You may contact Praveen Kartholy at 202-551-3778 or Gary Todd at 202-551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at 202-551-3637 or Geoff Kruczek at 202-551-3641 with any other questions.

Sincerely,

/s/ Geoffrey Kruczek for

Amanda Ravitz
Assistant Director

cc: (via e-mail) Aaron J. Alter, Esq.