

October 5, 2012

**VIA EDGAR**

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

Attention: Amanda Ravitz  
Praveen Kartholy  
Geoffrey Kruczek  
Jay Mumford  
Gary Todd

**Re: Ambarella, Inc.**  
**Registration Statement on Form S-1 (File No. 333-174838)**  
**Form 8-A (File No. 001-35667)**  
**Acceleration Request**  
**Requested Date: October 9, 2012**  
**Requested Time: 4:00 P.M. Eastern Time**

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, and Rule 12d1-2 of the Securities Exchange Act of 1934, as amended, Ambarella, Inc. (the "**Company**") hereby requests that the above-referenced Registration Statement on Form S-1 (File No. 333-174838) (the "**Registration Statement**") be declared effective at the "Requested Date" and "Requested Time" set forth above or at such later time as the Company or its counsel may orally request via telephone call to the staff (the "**Staff**") of the Division of Corporation Finance of the Securities and Exchange Commission (the "**Commission**") (the "**Registration Statement Acceleration Request**"). In connection with the Registration Statement Acceleration Request, the Company hereby requests that the above referenced Form 8-A (File No. 001-35667) also be declared effective at the "Requested Date" and "Requested Time" set forth above or at such later time as the Company or its counsel may orally request via telephone call to the Staff. Once the Registration Statement has been declared effective, please orally confirm that event with our counsel, Wilson Sonsini Goodrich & Rosati, P.C., by calling Jennifer D. Knapp at (650) 849-3041.

In connection with the acceleration request, the Company hereby acknowledges that:

- should the Commission or the Staff, acting pursuant to delegated authority, declare the Registration Statement on Form S-1 effective, it does not foreclose the Commission from taking any action with respect to the Registration Statement on Form S-1;
- 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 Registration Statement on Form S-1; 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.

*[Signature page follows]*

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Sincerely,

AMBARELLA, INC.

/s/ Feng-Ming Wang

Feng-Ming Wang  
Chairman of the Board of Directors,  
President and Chief Executive Officer

cc: Michael Morehead, Esq.  
**Ambarella, Inc.**

Larry W. Sonsini, Esq.  
Aaron J. Alter, Esq.  
Jennifer D. Knapp, Esq.  
**Wilson Sonsini Goodrich & Rosati, P.C.**

Andrew S. Williamson, Esq.  
David G. Peinsipp, Esq.  
**Cooley LLP**