UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

Ambarella, Inc.

(Exact name of Registrant as specified in its charter)

Cayman Islands (State or other jurisdiction of incorporation or organization) 98-0459628 (I.R.S. Employer Identification Number)

3101 Jay Street Santa Clara, CA 95054 (Address of principal executive offices, including zip code)

> 2012 Equity Incentive Plan 2012 Employee Stock Purchase Plan (Full title of the plan)

Feng-Ming Wang Chief Executive Officer c/o Ambarella Corporation 3101 Jay Street Santa Clara, CA 95054 (Name and address of agent for service)

(408) 734-8888 (Telephone number, including area code, of agent for service)

Copies to:

Larry W. Sonsini Herbert P. Fockler Wilson Sonsini Goodrich & Rosati, P.C. 650 Page Mill Road Palo Alto, California 94304 (650) 493-9300

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" or "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	\boxtimes	Accelerated filer	
Non-accelerated filer	\Box (do not check if a smaller reporting company)	Smaller reporting company	
		Emerging growth company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Ordinary shares, \$0.00045 par value per share:				
-Reserved for issuance pursuant to the 2012 Equity Incentive				
Plan	1,507,032 (2)	\$50.11 (4)	\$75,517,373.52	\$9,401.92
— Reserved for issuance pursuant to the Amended and Restated				
2012 Employee Stock Purchase Plan	418,620 (3)	\$42.60 (5)	\$17,833,212.00	\$2,220.24
TOTAL	1,925,652		\$93,350,585.52	\$11,622.16

(1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional ordinary shares of the Registrant that become issuable under the 2012 Equity Incentive Plan ("2012 Plan") and the Amended and Restated 2012 Employee Stock Purchase Plan (the "2012 ESPP") by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of the Registrant's outstanding ordinary shares.

(2) Represents ordinary shares that were automatically added on February 1, 2018 to the ordinary shares reserved for issuance under the 2012 Plan pursuant to an "evergreen" provision contained in the 2012 Plan. Pursuant to such provision, on February 1st of each fiscal year, the number of ordinary shares reserved for issuance under the 2012 Plan is automatically increased by a number equal to the lesser of (i) 3,500,000 ordinary shares, (ii) four and one half percent (4.5%) of the aggregate number of ordinary shares outstanding on January 31st of the preceding fiscal year, or (iii) a lesser number of shares that may be determined by the Registrant's Board of Directors.

(3) Represents ordinary shares that were automatically added on February 1, 2018 to the ordinary shares reserved for issuance under the 2012 ESPP pursuant to an "evergreen" provision contained in the 2012 ESPP. Pursuant to such provision, on February 1st of each fiscal year, the number of ordinary shares reserved for issuance under the 2012 ESPP is automatically increased by a number equal to the lesser of (i) 1,500,000 ordinary shares, (ii) one and one quarter percent (1.25%) of the aggregate number of ordinary shares outstanding on such date, or (iii) an amount determined by the Registrant's Board of Directors or a duly authorized committee of the Board of Directors.

(4) Estimated in accordance with Rule 457(h) solely for purposes of calculating the registration fee on the basis of \$50.11, the average of the high and low prices of the Registrant's ordinary shares as reported on The NASDAQ Global Market on March 27, 2018.

(5) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of 85% of \$50.11, the average of the high and low prices of the Registrant's ordinary shares as reported on The NASDAQ Global Market on March 27, 2018. Pursuant to the 2012 ESPP, the purchase price of the ordinary shares will be 85% of the lower of the fair market value of the ordinary shares on the first trading day of the offering period or on the last day of the offering period.

PART II

INFORMATION REQUIRED IN REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

Ambarella, Inc. (the "Registrant") hereby incorporates by reference into this Registration Statement the following documents:

(1) The Registrant's Annual Report on Form 10-K for the fiscal year ended January 31, 2018, filed with the Commission on March 30, 2018 pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act");

(2) All other reports filed with the Commission pursuant to Sections 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Registrant's Annual Report referred to in (1) above; and

(3) The description of the Registrant's ordinary shares contained in the Company's Registration Statement on Form 8-A (File No. 001-35667) filed with the Commission on September 26, 2012, pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Cayman Islands law does not limit the extent to which a company's memorandum and articles of association may provide for indemnification of directors and officers, except to the extent any such provision may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against civil fraud or the consequences of committing a crime. The Registrant's amended and restated memorandum and articles of association provide for indemnification of directors and officers against any liability, action, proceeding, claim, demand, costs, damages or expenses, including legal expenses, which they may incur as a result of any act or failure to act in carrying out their functions other than such liability (if any) that they may incur by reason of their own actual fraud or willful default.

In addition, the Registrant has entered into separate indemnification agreements with its directors and officers, pursuant to which the Registrant has agreed to indemnify its directors and officers against certain liabilities and expenses incurred by such persons in connection with claims by reason of their being such a director or officer.

The Registrant has purchased and intends to maintain insurance on behalf of each person who is or was a director or officer of the Registrant against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit		Incorporated by Reference			
Number	Exhibit Description	Form	File No.	Exhibit	Filing Date
4.1.1	2012 Equity Incentive Plan and forms of agreements thereunder.	10-K	001-35667	10.2.1	March 30, 2017
4.1.2*	Form of Stock Option Agreement under 2012 Equity Incentive Plan.	S-1/A	333-174838	10.2.2	September 12, 2012
4.1.3*	Form of Restricted Stock Agreement under 2012 Equity Incentive Plan.	S-1/A	333-174838	10.2.3	September 12, 2012
4.1.4*	Form of Restricted Stock Unit Agreement under 2012 Equity Incentive Plan.	S-1/A	333-174838	10.2.4	September 12, 2012
4.1.5	Form of Performance Restricted Stock Agreement under 2012 Equity Incentive Plan.	10-K	001-35667	10.2.5	March 30, 2017
4.2	Amended and Restated 2012 Employee Stock Purchase Plan.	10-Q	001-35667	10.1	September 8, 2015
5.1	<u>Opinion of Maples and Calder, Cayman Islands counsel to the Registrant, regarding</u> <u>the validity of the Ordinary Shares being registered.</u>				
23.1	<u>Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting</u> <u>Firm.</u>				
23.2	Consent of Maples and Calder (contained in Exhibit 5.1 hereto).				

24.1 <u>Power of Attorney (contained on signature page hereto).</u>

* Incorporated by reference to exhibits filed with the Registrant's Registration Statement on Form S-1, as amended (Registration No. 333-174838), as declared effective on October 9, 2012.

Item 9. Undertakings.

A. The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent posteffective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Santa Clara, California, on the 30th day of March, 2018.

AMBARELLA, INC.

By: /s/ Feng-Ming Wang

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

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Feng-Ming Wang and George Laplante, jointly and severally, as his true and lawful attorneys-in-fact and agents with full power of substitution, for him in any and all capacities, to sign the Registration Statement on Form S-8 of Ambarella, Inc., and any or all amendments (including post-effective amendments thereto), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Feng-Ming Wang Feng-Ming Wang	President, Chief Executive Officer, Executive Chairman and Director (Principal Executive Officer)	March 30, 2018
/s/ George Laplante George Laplante	Chief Financial Officer (Principal Financial and Accounting Officer)	March 30, 2018
/s/ Leslie D. Kohn Leslie D. Kohn	Chief Technical Officer and Director	March 30, 2018
/s/ Chenming C. Hu Chenming C. Hu	Director	March 30, 2018
/s/ Christopher B. Paisley Christopher B. Paisley	Director	March 30, 2018
/s/ Jeff Richardson Jeff Richardson	Director	March 30, 2018
/s/ Hsiao-Wuen Hon Hsiao-Wuen Hon	Director	March 30, 2018
/s/ Andrew W. Verhalen Andrew W. Verhalen	Director	March 30, 2018
/s/ George Laplante George Laplante	(Authorized U.S. Representative)	March 30, 2018

Ambarella, Inc. PO Box 309, Ugland House Grand Cayman KY1-1104 Cayman Islands

30 March 2018

Dear Sirs

Ambarella, Inc.

We have acted as Cayman Islands counsel to Ambarella, Inc. (the "**Company**") to provide this legal opinion in connection with the Company's registration statement on Form S-8, including all amendments or supplements thereto (the "**Form S-8**"), filed with the United States Securities and Exchange Commission (the "**Commission**") under the United States Securities Act of 1933 (the "**Act**"), as amended (the "**Registration Statement**") relating to the reservation for issuance of (i) 1,507,032 Ordinary Shares, par value US\$0.00045 per share (the "**2012 Shares**"), upon the granting of certain awards under the 2012 Equity Incentive Plan (the "**2012 Plan**"); (ii) 418,620 Ordinary Shares, par value US\$0.00045 per share of the Company (the "**ESPP Shares**" and, together with the 2012 Shares, the "**Shares**"), to be issued under the Amended and Restated 2012 Employee Stock Purchase Plan (the "**ESPP**" and together with the 2012 Plan, the "**Plans**").

1 Documents Reviewed

We have reviewed originals, copies, drafts or conformed copies of the following documents, and such other documents as we deem necessary:

- 1.1 The certificate of incorporation dated 15 January 2004 and the amended and restated memorandum of association and the second amended and restated articles of association of the Company adopted on 14 September 2012 and effective immediately upon the closing of the Company's initial public offering of its Ordinary Shares on 15 October 2012 (the "Articles").
- 1.2 The minutes (the "**Minutes**") of the meeting of the board of directors of the Company held on 28 August 2012 and the secretary's certificate (the "**Secretary's Certificate**") certifying the resolutions passed at the meeting of the board of directors of the Company held on 26 February 2018 (together, the "**Meetings**") and the corporate records of the Company maintained at its registered office in the Cayman Islands.

- 1.3 The written resolutions of the shareholders of the Company dated 21 September 2012 (the "Shareholder Resolutions").
- 1.4 A certificate of good standing with respect to the Company issued by the Registrar of Companies (the "Certificate of Good Standing").
- 1.5 A certificate from a director of the Company a copy of which is attached to this opinion letter (the "Director's Certificate").
- 1.6 The Plans.
- 1.7 The Registration Statement.

2 Assumptions

The following opinions are given only as to, and based on, circumstances and matters of fact existing and known to us on the date of this opinion letter. These opinions only relate to the laws of the Cayman Islands which are in force on the date of this opinion letter. In giving the following opinions, we have relied (without further verification) upon the completeness and accuracy of the Director's Certificate and the Certificate of Good Standing. We have also relied upon the following assumptions, which we have not independently verified:

- 2.1 The Plans have been authorised and duly executed and unconditionally delivered by or on behalf of the Company in accordance with all relevant laws (other than the laws of the Cayman Islands).
- 2.2 The Plans are legal, valid, binding and enforceable against all relevant parties in accordance with their terms under the laws of the State of California and all other relevant laws (other than, with respect to the Company, the laws of the Cayman Islands).
- 2.3 The choice of the laws of the State of California as the governing law of the Plans has been made in good faith and would be regarded as a valid and binding selection which will be upheld by the courts of the State of California and any other relevant jurisdiction (other than the Cayman Islands) as a matter of the laws of the State of California and all other relevant laws (other than the laws of the Cayman Islands).
- 2.4 Copy documents, conformed copies or drafts of documents provided to us are true and complete copies of, or in the final forms of, the originals.
- 2.5 All signatures, initials and seals are genuine.
- 2.6 The power, authority and legal right of the Company under all relevant laws and regulations (other than the laws of the Cayman Islands) to enter into, execute, unconditionally deliver and perform its obligations under the Plans.
- 2.7 There is nothing under any law (other than the law of the Cayman Islands) which would or might affect the opinions hereinafter appearing. Specifically, we have made no independent investigation of the laws of the State of California.

2.8 The Company has received, or will receive, money or money's worth (the "**Consideration**") in consideration for the issue of the Shares, and none of the Shares have, or will be, issued for less than par value.

Save as aforesaid we have not been instructed to undertake and have not undertaken any further enquiry or due diligence in relation to the transaction the subject of this opinion.

3 Opinions

Based upon, and subject to, the foregoing assumptions and the qualification set out below, and having regard to such legal considerations as we deem relevant, we are of the opinion that the Shares to be offered and issued by the Company pursuant to the provisions of the Plans, have been duly authorised for issue, and when issued by the Company pursuant to the provisions of the Plans for the consideration fixed thereto and duly registered in the Company's register of members (shareholders), will be validly issued and (assuming that all of the Consideration is received by the Company) will be fully paid and non-assessable.

4 Qualifications

The opinions expressed above are subject to the following qualification:

4.1 Under the Companies Law (2018 Revision) of the Cayman Islands (the "**Companies Law**"), the register of members of a Cayman Islands company is by statute regarded as prima facie evidence of any matters which the Companies Law directs or authorises to be inserted therein. A third party interest in the shares in question would not appear. An entry in the register of members may yield to a court order for rectification (for example, in the event of fraud or manifest error).

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. In providing our consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the Rules and Regulations of the Commission thereunder.

This opinion is addressed to you and may be relied upon by you and your counsel. This opinion is limited to the matters detailed herein and is not to be read as an opinion with respect to any other matter.

Yours faithfully

/s/ Maples and Calder

Maples and Calder

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 30, 2018 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Ambarella Inc.'s Annual Report on Form 10-K for the year ended January 31, 2018.

/s/ PricewaterhouseCoopers LLP San Jose, California March 30, 2018