SunEdison Semiconductor Ltd Form SC 13G February 17, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Schedule 13G

Under the Securities Exchange Act of 1934

SunEdison Semiconductor Limited

(Name of Issuer)

Ordinary Shares, no par value

(Title of Class of Securities)

Y8213L102

(CUSIP Number)

December 31, 2014

(Date of Event which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- " Rule 13d-1(b)
- " Rule 13d-1(c)

- x Rule 13d-1(d)
- * The remainder of this cover page shall be filled out for a reporting person s initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 (Act) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No Y8213L102 Page 2 of 8 Pages

1 NAMES OF REPORTING PERSON

I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY):

SunEdison, Inc.

56-1505767

- 2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)
 - (a) " (b) x
- 3 SEC USE ONLY
- 4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5 SOLE VOTING POWER

NUMBER OF

SHARES -0-

6 SHARED VOTING POWER

BENEFICIALLY

OWNED BY

23,560,251 (See Item 4)

EACH 7 SOLE DISPOSITIVE POWER

REPORTING

PERSON -0-

8 SHARED DISPOSITIVE POWER

WITH

23,560,251 (See Item 4)

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

23,560,251 (See Item 4)

- 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (See Instructions)
- 11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
 - 56.8% (See Item 4)
- 12 TYPE OF REPORTING PERSON (See Instructions)

CO

CUSIP No Y8213L102 Page 3 of 8 Pages

1 NAMES OF REPORTING PERSON

I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY):

SunEdison International, Inc.

43-1804551

- 2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)
 - (a) " (b) x
- 3 SEC USE ONLY
- 4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5 SOLE VOTING POWER

NUMBER OF

SHARES -0-

6 SHARED VOTING POWER

BENEFICIALLY

OWNED BY

23,560,251 (See Item 4)

EACH 7 SOLE DISPOSITIVE POWER

REPORTING

PERSON -0-

8 SHARED DISPOSITIVE POWER

WITH

23,560,251 (See Item 4)

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

23,560,251 (See Item 4)

- 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (See Instructions)
- 11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
 - 56.8% (See Item 4)
- 12 TYPE OF REPORTING PERSON (See Instructions)

CO

13G

Page 4 of 8 Pages

Item 1(a) Name of Issuer:

SunEdison Semiconductor Limited

Item 1(b) Address of Issuer s Principal Executive Offices

11 Lorong 3 Toa Payoh Singapore 319579

Item 2(a) Name of Person Filing:

SunEdison, Inc. (SunEdison) and SunEdison International, Inc. (SunEdison International) (collectively, the Reporting Persons)

The Reporting Persons have entered into a Joint Filing Agreement, dated February 17, 2015, a copy of which is attached as Exhibit A to this Statement, pursuant to which the Reporting Persons agreed to file this Schedule 13G and any amendments thereto jointly in accordance with the provisions of Rule 13d-1(k)(1) under the Act.

Item 2(b) Address of Principal Business Office or, if none, Residence:

The address of the principal business office of each of the Reporting Persons is c/o SunEdison, Inc., 13736 Riverport Drive, Maryland Heights, Missouri 63043.

Item 2(c) <u>Citizenship:</u>

Each of the Reporting Persons is a corporation organized under the laws of the State of Delaware.

Item 2(d) Title of Class of Securities:

Ordinary shares, no par value (the Ordinary Shares).

Item 2(e) <u>CUSIP Number:</u>

CUSIP Number: Y8213L102

Item 3 If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) "Broker or dealer registered under section 15 of the Act (15 U.S.C. 780).
- (b) "Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) "Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).

(d)

- " Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C 80a-8).
- (e) " An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E).

13G

Page 5 of 8 Pages

- (f) An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F).
- (g) " A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G).
- (h) " A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813).
- (i) " A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3).
- (j) " Group, in accordance with §240.13d-1(b)(1)(ii)(J).

Not Applicable

Item 4 Ownership:

(a) Amount beneficially owned:

As of December 31, 2014, the Reporting Persons beneficially owned in the aggregate 23,560,251 Ordinary Shares directly held by SunEdison International, and indirectly owned by SunEdison, which as the direct parent of SunEdison International has shared voting and investment power over such Ordinary Shares.

(b) Percent of class:

56.8%

All percentages calculated in this Schedule 13G are based upon an aggregate of 41,506,175 Ordinary Shares outstanding as of December 31, 2014, as reported in the issuer s Prospectus, dated January 14, 2015, as filed with the Securities and Exchange Commission on January 15, 2015.

- (c) Number of shares as to which such person has:
 - (i) sole power to vote or to direct the vote: See Item 5 of each cover page
 - (ii) shared power to vote or to direct the vote: See Item 6 of each cover page
 - (iii) sole power to dispose or to direct the disposition of: See Item 7 of each cover page
 - (iv) shared power to dispose or to direct the disposition of: See Item 8 of each cover page

Item 5 Ownership of Five Percent or Less of a Class:

If this statement is being filed to report the fact that as of the date hereof each of the Reporting Persons has ceased to be the beneficial owner of more than five percent of the class of securities, check the following ".

Not Applicable

13G

Page 6 of 8 Pages

Item 6 Ownership of More Than Five Percent on Behalf of Another Person:

See response to items 4(a) and 4(b) above.

Item 7 <u>Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company:</u>

Not Applicable.

Item 8 <u>Identification and Classification of Members of the Group:</u>

Not Applicable.

Item 9 Notice of Dissolution of Group:

Not Applicable.

Item 10 Certification:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

13G

Page 7 of 8 Pages

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 17, 2015

SUNEDISON, INC.

By: /s/ Martin H. Truong Name: Martin H. Truong

Title: Secretary

SUNEDISON INTERNATIONAL, INC.

By: /s/ Martin H. Truong Name: Martin H. Truong

Title: Secretary

13G

Page 8 of 8 Pages

EXHIBIT A

JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) promulgated under the Securities Exchange Act of 1934, as amended, each of the undersigned acknowledges and agrees that the foregoing statement on Schedule 13G is filed on behalf of the undersigned and that all subsequent amendments to this statement of Schedule 13G shall be filed on behalf of the undersigned without the necessity of filing additional joint filing agreements. Each of the undersigned acknowledges that it shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning it contained therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that it knows or has reason to believe that such information is inaccurate.

Date: February 17, 2015

SUNEDISON, INC.

By: /s/ Martin H. Truong Name: Martin H. Truong

Title: Secretary

SUNEDISON INTERNATIONAL, INC.

By: /s/ Martin H. Truong Name: Martin H. Truong

Title: Secretary