

ALPHA & OMEGA SEMICONDUCTOR Ltd
Form S-3
November 17, 2016

As filed with the United States Securities and Exchange Commission on November 17, 2016
Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
(Exact name of Registrant as specified in its charter)

Bermuda 77-0553536
(State or Other Jurisdiction of (I.R.S. Employer
Incorporation or Organization) Identification No.)
Clarendon House, 2 Church Street
Hamilton HM 11, Bermuda
(408) 830-9742
(Address, Including Zip Code, and Telephone Number,
Including Area Code, of Registrant's Principal Executive Offices)

Mike F. Chang
Alpha and Omega Semiconductor Limited
Clarendon House, 2 Church Street
Hamilton HM 11, Bermuda
(408) 830-9742
(Name, Address, Including Zip Code, and Telephone Number,
Including Area Code, of Agent for Service)

Copies to:
Albert Lung, Esquire
Morgan, Lewis & Bockius LLP
1400 Page Mill Road
Palo Alto, CA 94304
(650) 843-4000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional class of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer Accelerated filer x

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities To Be Registered | Amount To Be Registered | Proposed Maximum Offering Price Per Share ⁽¹⁾ | Proposed Maximum Aggregate Offering Price ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ | Amount of Registration Fee ⁽⁵⁾ |
|--|-------------------------|--|---|---|
| Common Shares | (1) | (1) | (1) | N/A |
| Preferred Shares | (1) | (1) | (1) | N/A |
| Debt Securities | (1) | (1) | (1) | N/A |
| Warrants to Purchase Common Shares | (1) | (1) | (1) | N/A |
| Warrants to Purchase Preferred Shares | (1) | (1) | (1) | N/A |
| Units | (1) | (1) | (1) | N/A |
| Total | (1) | (1) | \$250,000,000.00 | \$28,975.00 |

(1) There are being registered hereunder by the registrant such indeterminate number of shares of common shares, shares of preferred shares, debt securities and such indeterminate number of warrants to purchase shares of common shares and shares of preferred shares as shall have an aggregate initial offering price not to exceed \$250,000,000.00. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. The proposed maximum initial offering price per unit will be determined, from time to time, by the registrant in connection with the issuance by the registrant of the securities registered hereunder. There are also being registered hereunder by the registrant an indeterminate number of shares of common shares or preferred shares as shall be issuable upon exercise of any securities that provide for such issuance.

(2) If any debt securities are issued with an original issue discount, the offering price of such debt securities shall be such greater amount as shall result in an aggregate maximum offering price not to exceed \$250,000,000.00, less the dollar amount of any securities previously issued hereunder.

(3) Exclusive of any accrued interest, distributions and dividends, if any.

(4) Includes consideration to be received by registrant for registered securities that are issuable upon exercise, conversion or exchange of other registered securities.

(5) Pursuant to Rule 457(o) of the rules and regulations under the Securities Act of 1933, as amended (the "Securities Act"), the registration fee has been calculated on the basis of the proposed maximum aggregate offering price and the number of securities being registered has been omitted.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell any of the securities described in this prospectus or accept an offer to buy these securities until the registration statement that we have filed with the Securities and Exchange Commission to cover the securities is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED NOVEMBER 17, 2016

PROSPECTUS

ALPHA AND OMEGA SEMICONDUCTOR LIMITED

\$250,000,000

Common Shares

Preferred Shares

Debt Securities

Warrants to Purchase Common Shares

Warrants to Purchase Preferred Shares

We may offer and sell from time to time shares of common shares, shares of preferred shares, debt securities or warrants to purchase shares of common shares or shares of preferred shares. We may sell any combination of the above described securities, in one or more offerings in amounts, at prices and on terms determined at the time of the offering. We refer to the shares of common shares, shares of preferred shares, debt securities and warrants to purchase shares of common shares or shares of preferred shares collectively as the “securities.”

This prospectus provides you with a general description of the securities that we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add information or update information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with the documents incorporated by reference and described under the heading “Where You Can Find More Information” before you make your investment decision.

We will sell the securities to underwriters or dealers, through agents, or directly to investors.

An investment in the securities offered under this prospectus involves a high degree of risk. You should carefully consider the risk factors described in the applicable prospectus supplement and certain of our filings with the Securities and Exchange Commission, as described under “Risk Factors” on page 3.

Our common shares is listed on The NASDAQ Global Select Market under the symbol “AOSL”. On November 16, 2016, the last reported sale price of our common shares on The NASDAQ Global Select Market was \$21.39 per share.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is ,

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ABOUT THIS PROSPECTUS

This prospectus is part of a “shelf” registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC. Under this shelf registration statement, we may sell any combination of securities described in this prospectus from time to time for an aggregate offering price of up to \$250,000,000.

You should rely only on the information contained in or specifically incorporated by reference into this prospectus or a prospectus supplement. No dealer, sales person, agent or other individual has been authorized to give any information or to make any representations not contained in this prospectus. If given or made, such information or representations must not be relied upon as having been authorized by us.

This prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, the securities offered hereby in any jurisdiction where, or to any person to whom, it is unlawful to make such offer or solicitation.

The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of securities. Neither the delivery of this prospectus nor any sale made hereunder shall, under any circumstances, create an implication that there has not been any change in the facts set forth in this prospectus or in our affairs since the date of this prospectus.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some statements contained in this prospectus and the information incorporated by reference into this prospectus are forward-looking with respect to our operations, research, development and commercialization activities and financial condition. Such forward-looking statements are based on our current views and assumptions regarding future events, future business conditions and the outlook for the company based on currently available information. Statements that are forward-looking in nature should be read with caution because they involve risks and uncertainties, which are included, for example, in specific and general discussions about:

- anticipated trends and challenges in our business and the markets in which we operate;
- our ability to anticipate market needs or develop new or enhanced products to meet those needs;
- the level of utilization of our fabrication facility in Oregon;
- our ability to integrate our expertise in developing power semiconductors;
- the anticipated benefits and costs associated with our joint venture with Chongqing government in China;
- the decline of PC market and our ability to mitigate such decline;
- our ability to compete in our industry;
- our ability to defend ourselves in intellectual property infringement lawsuits against us and protect our confidential information and intellectual property rights;
- our ability to successfully identify and manage any potential acquisitions;
- our investment in our in-house packaging and testing facility;
- our ability to build and maintain relationships and achieve additional design wins with leading ODMs and OEMs;
- our expectations regarding the use of proceeds from this offering;
- our ability to retain senior management, key personnel and other skilled employees and recruit qualified engineers;
- our ability to maintain relationships with third-party foundries and subcontractors;
- our ability to manage growth; and
- economic and business conditions in China.

Various terms and expressions similar to them are intended to identify these cautionary statements. These terms include: “anticipates,” “believes,” “continues,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “seeks,” “should” and “will.” Actual results may differ materially from those expressed or implied in those statements. Factors that could cause these differences include, but are not limited to, those discussed under “Risk Factors.” Alpha and Omega undertakes no obligation to publicly release any revisions to forward-looking statements to reflect events or circumstances arising after the date of this prospectus. Readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus.

ABOUT ALPHA AND OMEGA SEMICONDUCTOR LIMITED

We are a designer, developer and global supplier of a broad portfolio of power semiconductors. Our portfolio of power semiconductors includes approximately 1,600 products, and has grown significantly with the introduction of over 90 new products during each of the fiscal years ended June 30, 2016, 2015 and 2014. Our teams of scientists and engineers have developed extensive intellectual properties and technical knowledge that encompass major aspects of power semiconductors, which we believe it enables us to introduce and develop innovative products to address the increasingly complex power requirements of advanced electronics. We have an extensive patent portfolio that consists of 601 patents and 150 patent applications in the United States as of June 30, 2016. We differentiate ourselves by integrating our expertise in technology, design, manufacturing capability and advanced packaging to optimize product performance and cost. Our portfolio of products targets high-volume applications, including personal computers, flat panel TVs, LED lighting, smart phones, battery packs, consumer and industrial motor controls and power supplies for TVs, computers, servers and telecommunications equipment.

During the fiscal year ended June 30, 2016, we continued our diversification strategy by developing new silicon and packaging platforms to expand our serviceable available market, or SAM and offer higher performance products. Our metal-oxide-semiconductor field-effect transistors, or MOSFET, portfolio expanded significantly across a full range of voltage applications. We also developed new technologies and products designed to penetrate into markets beyond our MOSFET computing base, including the consumer, communications and industrial markets as well as power IC for the next generation computing applications.

Our business model leverages global resources, including research and development and manufacturing in the United States and Asia. Our sales and technical support teams are localized in several growing markets primarily in Asia. We operate a 200mm wafer fabrication facility located in Hillsboro, Oregon, or the Oregon fab, which enables us to accelerate proprietary technology development, new product introduction and improve our financial performance. To meet the market demand for the more mature high volume products, we also utilize the wafer manufacturing capacity of selected third party foundries. For assembly and test, we primarily rely upon our in-house facilities in China. In addition, we utilize subcontracting partners for industry standard packages. We believe our in-house packaging and testing capability provides us with a competitive advantage in proprietary packaging technology, product quality, costs and sales cycle time.

On March 29, 2016, we entered into a joint venture contract (the “JV Agreement”) with two investment funds affiliated with the municipalities of Chongqing (the “Chongqing Funds”), pursuant to which we and Chongqing Funds formed a joint venture, (the “JV Company”), for the purpose of constructing a power semiconductor packaging, testing and wafer fabrication facility in the Liangjiang New Area of Chongqing, China (the “JV Transaction”). The total initial capitalization of the JV Company is \$330.0 million (the “Initial Capitalization”). The Initial Capitalization will be completed in stages commencing on the incorporation of the JV Company. We own 51%, and the Chongqing Funds own 49%, of the equity interest in the JV Company. We expect the JV Company to commence its initial production in the first half of fiscal 2018. Over the long term, the JV Company plans to construct a 12-inch wafer fabrication facility for the production of power semiconductors.

We were incorporated in Bermuda on September 27, 2000 as an exempted limited liability company. The address of our registered office is Clarendon House, 2 Church Street, Hamilton HM 11, Bermuda. Our agent for service of process in the U.S. for the purpose of our securities filings is our Chief Executive Officer, Mike F. Chang, c/o Alpha and Omega Semiconductor Incorporated, 475 Oakmead Parkway, Sunnyvale, CA 94085. Telephone number of our agent is (408) 830-9742.

RISK FACTORS

An investment in the securities offered through this prospectus involves certain risks. You should carefully consider the specific risks set forth under the caption "Risk Factors" in the applicable prospectus supplement and under the caption "Risk Factors" in our filings with the Securities and Exchange Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, including our annual reports on Form 10-K, incorporated by reference herein, before making an investment decision. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also affect our business operations. To the extent that a particular offering implicates additional significant risks, we will include a discussion of those risks in the applicable prospectus supplement.

USE OF PROCEEDS

Except as may be otherwise set forth in the prospectus supplement accompanying this prospectus, we will use the net proceeds we receive from sales of the securities offered hereby for general corporate purposes, including support for our continuing research and development, commercialization activities, business development activities, and, if opportunities arise, acquisitions of businesses, products, technologies or licenses that are complementary to our business, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus.

RATIO OF EARNINGS TO FIXED CHARGES

The following summary is qualified by the more detailed information appearing in the computation table found in Exhibit 12.1 to the registration statement of which this prospectus is part and the historical financial statements, including the notes to those financial statements, incorporated by reference in this prospectus. The following table sets forth our ratio of earnings to fixed charges for each of the periods indicated:

| | Year Ended December 31 | | | |
|---|------------------------|-----------|-------------|-------|
| | 2015 | 2014 | 2013 | 2012 |
| Ratio of earnings to fixed charges (1) | 48.72 | — | — | 49.27 |
| Deficiency of earnings available to cover fixed charges | \$-3,866,650 | \$335,346 | \$1,574,004 | \$ — |

(1) The ratio of earnings to fixed charges was computed by dividing earnings by fixed charges. For periods presented, earnings were negative and calculation of such ratio is not meaningful.

PLAN OF DISTRIBUTION

We may sell the securities being offered by us in this prospectus:

- directly to purchasers or investors;
- through agents;
- through dealers;
- through underwriters; or
- through a combination of any of these methods of sale.

We and our agents and underwriters may sell the securities being offered by us in this prospectus from time to time in one or more transactions:

- at a fixed price or prices which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Offers to purchase securities may be solicited directly by us, or by agents designated by us, from time to time. Any such agent, which may be deemed to be an underwriter as that term is defined in the Securities Act of 1933, as amended (the "Securities Act"), involved in the offer or sale of the securities in respect of which this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth, in the applicable prospectus supplement.

If an underwriter is, or underwriters are, utilized in the offer and sale of securities in respect of which this prospectus and the accompanying prospectus supplement are delivered, we will execute an underwriting agreement with such underwriter(s) for the sale to it or them and the name(s) of such underwriter(s) and the terms of the transaction, including any underwriting discounts, commissions and other items constituting compensation of the underwriters and dealers, if any, will be set forth in such prospectus supplement, which will be used by the underwriter(s) to make resales of the securities in respect of which this prospectus and such prospectus supplement are delivered to the public. The securities will be acquired by the underwriters for their own accounts and may be sold by the underwriters from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts, commissions or concessions allowed or reallocated or paid to dealers may be changed from time to time. We may grant underwriters who participate in the distribution of securities an option to purchase additional securities to cover over-allotments, if any, in connection with the distribution.

We may sell directly to, and solicit offers from institutional investors, individuals, or the public. We will describe the terms of any such sales in the applicable prospectus supplement relating to the offering.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. The name of the dealer and the terms of the transaction will be identified in the applicable prospectus supplement relating to the offering.

If an agent is used in an offering of securities being offered by this prospectus, the agent will be named, and the terms of the agency will be described, in the applicable prospectus supplement relating to the offering. Unless otherwise indicated in the prospectus supplement, an agent will act on a best efforts basis for the period of its appointment.

If indicated in the applicable prospectus supplement, we will authorize underwriters or their agents to solicit offers by certain institutional investors to purchase our securities pursuant to contracts providing for payment and delivery at a future date. Institutional investors with which these contracts may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others. In all cases, these purchasers must be approved by us. The obligations of any purchaser under any of these contracts will not be subject to any conditions except that (a) the purchase of the securities must not at the time of delivery be prohibited under the laws of any jurisdiction to which that purchaser is subject and (b) if the securities are also being sold to underwriters, we must have sold to these underwriters the securities not subject to delayed delivery. Underwriters and other agents will not have any responsibility in respect of the validity or performance of these contracts.

Certain of the underwriters, dealers or agents utilized by us in any offering may be customers of, including borrowers from, engage in transactions with, and perform services for us or one or more of our affiliates in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled, under agreements which may be entered into with us, to indemnification against and contribution toward certain civil liabilities, including liabilities under the Securities Act. The terms of any indemnification provisions will be set forth in a prospectus supplement.

Until the distribution of the securities is completed, rules of the Securities and Exchange Commission may limit the ability of the underwriters and certain selling group members, if any, to bid for and purchase the securities. As an exception to these rules, the representatives of the underwriters, if any, are permitted to engage in certain transactions that stabilize the price of the securities in accordance with Regulation M, but only in the case of a fixed-price offering. Such transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities.

If underwriters create a short position in the securities in connection with the offering thereof (i.e., if they sell more securities than are set forth on the cover page of the applicable prospectus supplement), the representatives of such underwriters may reduce that short position by purchasing securities in the open market. Any such representatives also may elect to reduce any short position by exercising all or part of any over-allotment option described in the applicable prospectus supplement.

Any such representatives also may impose a penalty bid on certain underwriters and selling group members. This means that if the representatives purchase securities in the open market to reduce the underwriters' short position or to stabilize the price of the securities, they may reclaim the amount of the selling concession from the underwriters and selling group members who sold those shares as part of the offering thereof.

In general, purchases of a security for the purpose of stabilization or to reduce a syndicate short position could cause the price of the security to be higher than it might otherwise be in the absence of such purchases. The imposition of a penalty bid might have an effect on the price of a security to the extent that it were to discourage resales of the security by purchasers in the offering.

Neither we nor any of the underwriters, if any, makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the securities. In addition, neither we nor any of the underwriters, if any, makes any representation that the representatives of the underwriters, if any, will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice.

Each series of securities covered by this prospectus would be a new issue with no established trading market, other than our common shares which is listed on The NASDAQ Global Select Market. Any shares of common shares sold pursuant to a prospectus supplement will be listed on The NASDAQ Global Select Market or a shares exchange on which the common shares offered is then listed, subject (if applicable) to an official notice of issuance. Any underwriters for whom securities are sold by us for public offering and sale may make a market in the securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice.

The securities other than the common shares may or may not be listed on a national securities exchange or eligible for quotation or trading on The NASDAQ Global Select Market. Therefore, we cannot provide any assurance to you concerning the liquidity of any of the securities covered by this prospectus.

Under the securities laws of some states, the securities registered by the registration statement that includes this prospectus may be sold in those states only through licensed brokers or dealers.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering. The securities offered by this prospectus may or may not be listed on a national securities exchange or a foreign securities exchange. We cannot give any assurances that there will be a market for any of the securities offered by this prospectus and any prospectus supplement.

THE SECURITIES WE MAY OFFER

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplement, summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in a prospectus supplement, the terms of the securities may revise, amend, modify or supersede the terms we have summarized below. We will also include in the prospectus supplement information, where applicable, about material United States federal income tax considerations relating to the securities, and the securities exchange or market, if any, on which the securities will be listed or quoted.

We may sell from time to time, in one or more offerings, one or more of the following securities:

- common shares;
- preferred shares;
- debt securities;
- warrants to purchase common shares; and
- warrants to purchase preferred shares.

These securities may be offered and sold from time to time for an aggregate offering price not to exceed \$250,000,000.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

DESCRIPTION OF COMMON SHARE

For a description of the material terms and provisions of our common shares and each other class of our securities which qualifies or limits our common shares, please see the applicable prospectus supplement, as well as the description of our capital shares in our Registration Statement on Form F-1 dated March 31, 2010 which is incorporated by reference in this prospectus.

DESCRIPTION OF PREFERRED STOCK

Under Bermuda law and our bye-laws, our board of directors is authorized, without shareholder approval, to issue shares of preferred shares from time to time in one or more series. Our board of directors may fix the rights, preferences, privileges and restrictions of this stock. Some of the rights, preferences and privileges that our board of directors may designate include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and sinking fund terms. Our board of directors may determine the number of shares constituting any series or the designation of such series. Any or all of the rights, preferences and privileges selected by the board of directors may be greater than the rights of the common shares.

If we offer a specific series of preferred shares under this prospectus, we will describe the terms of the preferred shares in the applicable prospectus supplement and will file a copy of the certificate of designation establishing the terms of the preferred shares with the SEC. To the extent required or applicable, this description will include:

- the title and stated value;
- the number of shares offered, the liquidation preference per share and the offering price;
- the dividend rate(s), period(s) and/or payment date(s), or method(s) of calculation for such dividends;

- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends accumulate;
- the provisions for any sinking fund, if any;
- the provisions for redemption, if any;
- any listing of the preferred shares on any securities exchange or market;
- whether preferred shares will be convertible into or exchangeable for our common shares or other of our securities, and, if applicable, the conversion or exchange price (or how it will be calculated) and conversion or exchange period;
- voting rights, if any;
- if appropriate, a discussion of any applicable U.S. federal income tax considerations;
- the relative ranking and preference of the preferred shares as to dividend rights and rights upon liquidation, dissolution or winding up of the affairs of Alpha and Omega; and
- any other specific terms, preferences, rights, limitations or restrictions.

The transfer agent and registrar for any class or series of preferred shares will be set forth in the applicable prospectus supplement.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus, but is not complete. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we offer under a prospectus supplement may revise, amend, modify or supersede the terms we describe below. As of the date of this prospectus, we have no outstanding registered debt securities. Unless the context requires otherwise, whenever we refer to the “indentures,” we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures. Forms of debt securities containing the terms of the debt securities being offered, and other related documents will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures and the trustee will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term “trustee” to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements related to the debt securities that we may offer under this prospectus, as well as the complete indentures that contains the terms of the debt

securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers' certificate or by a supplement indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

• the title;

• the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;

• any limit on the amount that may be issued;

• whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;

• the maturity date;

• whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;

• the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

• whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;

• the terms of the subordination of any series of subordinated debt;

• the place where payments will be payable;

• restrictions on transfer, sale or other assignment, if any;

• our right, if any, to defer payment of interest and the maximum length of any such deferral period;

• the date, if any, after which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;

• the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;

• whether the indenture will restrict our ability or the ability of our subsidiaries to:

• incur additional indebtedness;

• issue additional securities;

- create liens;
- pay dividends or make distributions in respect of our capital shares or the capital shares of our subsidiaries;
- redeem capital shares;
- place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
- make investments or other restricted payments;
- sell or otherwise dispose of assets;
- enter into sale-leaseback transactions;
- engage in transactions with shareholders or affiliates;
- issue or sell shares of our subsidiaries; or
- effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the applicability of the provisions in the indenture on discharge;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common shares, our preferred shares or other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common shares, our preferred shares or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

• if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;

• if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;

• if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or we and the trustee receive notice from the holders of at least 51% in aggregate principal amount of the outstanding debt securities of the applicable series; and

• if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 51% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately.

If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

Subject to the terms of the indentures, the holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

• the direction so given by the holder is not in conflict with any law or the applicable indenture; and

- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

The indentures provide that if an event of default has occurred and is continuing, the trustee will be required in the exercise of its powers to use the degree of care that a prudent person would use in the conduct of its own affairs. The trustee, however, may refuse to follow any direction that conflicts with law or the indenture, or that the trustee determines is unduly prejudicial to the rights of any other holder of the relevant series of debt securities, or that would involve the trustee in personal liability. Prior to taking any action under the indentures, the trustee will be entitled to indemnification against all costs, expenses and liabilities that would be incurred by taking or not taking such action.

Modification of Indenture; Waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under “Description of Debt Securities — Consolidation, Merger or Sale”;
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under “Description of Debt Securities — General,” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or
- to change anything that does not adversely affect the interests of any holder of debt securities of any series in any material respect.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or otherwise provided in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

- extending the stated maturity of the series of debt securities;

reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or
reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement with respect to that series. See "Legal Ownership of Securities" below for a further description of the terms relating to any book-entry securities.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent

acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or

register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture and is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur. However, upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase shares of common shares or shares of preferred shares. The warrants may be issued independently or together with any other securities and may be attached to or separate from the other securities. Each series of warrants may be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrants will be evidenced by warrant certificates. Unless otherwise specified in the prospectus supplement, the warrant certificates may be traded separately from the securities with which the warrant certificates were issued. Warrant certificates may be exchanged for new warrant certificates of different denominations at the office of an agent that we will appoint. Until a warrant is exercised, the holder of a warrant does not have any of the rights of a holder of our securities and is not entitled to any payments on any securities issuable upon exercise of the warrants.

The prospectus supplement relating to a series of warrants will describe the specific terms of the warrants including the following:

the title of the warrants;

the aggregate number of the warrants;

- the price or prices at which the warrants will be issued and the currency in which the price for the warrants may be paid;
- the price at which and the currency in which the securities purchasable upon exercise of the warrants may be purchased and the various factors considered in determining that price;
- the dates on which the right to exercise the warrants will commence and expire and whether the exercise of warrants will be at the option of holders, at our option, or automatic;
- whether the warrants are exercisable by payment of cash, surrender of other securities, or both;
- provisions for changes to or adjustments in the exercise price of the warrants;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- if applicable, the designation and terms of the series of preferred shares with which the warrants are issued;
- if applicable, the designation and terms of the other securities with which the warrants are issued and the number of the warrants issued with each such other security;
- if applicable, the date on and after which the warrants and other related securities will be separately transferable;
- if applicable, any anti-dilution protection against future issuances;
- whether the warrants will be issued in registered form or bearer form;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of material U.S. federal income tax considerations; and
- any other terms of the warrants, including terms, procedures, and limitations relating to the exchange or exercise of the warrants.

DESCRIPTION OF UNITS

We may issue units comprising one or more securities described in this prospectus in any combination. Units may also include debt obligations of third parties, such as U.S. Treasury securities. Each unit may be issued so that the holder of the unit also is the holder of each security included in the unit. Thus, the unit may have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date.

To the extent appropriate, the applicable prospectus supplement will describe the specific terms of the units offered thereby, including the following:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provision for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

LEGAL MATTERS

The legality of the securities offered by this prospectus has been passed upon for us by Morgan, Lewis & Bockius LLP, Palo Alto, California.

EXPERTS

The consolidated financial statements, schedules, and management's assessment of the effectiveness of internal control over financial reporting incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the reports of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement that we filed with the SEC. The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's Public Reference Room at 100 F. Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our SEC filings are also available on the SEC's web site at <http://www.sec.gov>. We maintain a website at www.aosmd.com. The information contained on our website is not incorporated by reference in this prospectus and any accompanying prospectus supplement, and you should not consider it a part of this prospectus and any accompanying prospectus supplement.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information by referring to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference into this prospectus the documents listed below, and any future filings (other than the portions thereof deemed to be "furnished" to the SEC pursuant to Item 2.02 or Item 7.01 of Current Report on Form 8-K) we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), until we have sold all of the securities to which this prospectus relates or the offering is otherwise terminated, including any such filing prior to the effectiveness of this registration statement:

- our Annual Report on Form 10-K for the fiscal year ended June 30, 2016, filed with the SEC on August 26, 2016;
 - our Quarterly Report on Form 10-Q for the fiscal year ended September 30, 2016, filed with the SEC on November 7, 2016;
 - our current reports on Form 8-K, filed with the SEC on August 10, 2016, November 3, 2016 and November 14, 2016;
 - and
- the description of our common shares contained in our registration statement on Form 8-A filed under Section 12(g) of the Exchange Act with the SEC on April 22, 2010, including any amendment or reports filed for the purpose of updating such description.

To the extent that any statement in this prospectus is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus, the statement in this prospectus shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus or the registration statement. Statements contained in this prospectus as to the contents of any

contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to the registration statement.

We will furnish without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any or all of the information that has been incorporated into this prospectus by reference (except exhibits, unless they are specifically incorporated into this prospectus by reference) but not delivered with this prospectus. You should direct any requests for copies to:

Alpha and Omega Semiconductor Limited
Clarendon House, 2 Church Street
Hamilton HM 11, Bermuda
(408) 830-9742

ALPHA AND OMEGA SEMICONDUCTOR LIMITED

Common Shares

Preferred Shares

Debt Securities

Warrants to Purchase Common Shares

Warrants to Purchase Preferred Shares

Units

PROSPECTUS

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

ITEM 14. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses in connection with the issuance and distribution of the common shares being registered. All amounts are estimated except the SEC registration fee.

| | |
|------------------------------|-------------|
| SEC registration fee | \$28,975.00 |
| Accounting fees and expenses | * |
| Legal fees and expenses | * |
| Printing expenses | * |
| Miscellaneous | * |
| Total | \$ * |

* These fees and expenses depend upon the number of issuances and the amount of securities offered and accordingly cannot be estimated at this time.

ITEM 15. Indemnification of Officers and Directors.

We are a Bermuda exempted company. Under Bermuda law, a company may indemnify its directors, officers and auditors against any liability which by virtue of any rule of law would otherwise be imposed on them in respect of any negligence, default, breach of duty or breach of trust, except in cases where such liability arises from fraud or dishonesty of which such director, officer or auditor may be guilty in relation to the company. Bermuda law further provides that a company may indemnify its directors, officers and auditors against any liability incurred by them in defending any proceedings, whether civil or criminal, in which judgment is awarded in their favor or in which they are acquitted or granted relief by the Supreme Court of Bermuda. The Company's bye-laws provide that it shall indemnify its officers and directors in respect of their actions and omissions, except in respect of their fraud or dishonesty. Furthermore, Bermuda law permits the Company to purchase and maintain insurance for the benefit of any officer or director in respect of any loss or liability attaching to him in respect of any negligence, default, breach of duty or breach of trust, whether or not the Company may otherwise indemnify such officer or director. The Company has purchased and maintained a directors' and officers' liability policy for such a purpose.

Pursuant to our indemnification agreements with our directors and officers, we agree to indemnify our directors and officers against certain liabilities and expenses incurred by such persons in connection with claims made by reason of their being such a director or officer.

ITEM 16. Exhibits.

| Exhibit No. | Exhibit Title |
|-------------|---|
| 1.1 | Form of Underwriting Agreement for Common Shares. (1) |
| 1.2 | Form of Underwriting Agreement for Preferred Shares. (1) |
| 1.3 | Form of Underwriting Agreement for Senior and Subordinated debt securities. (1) |
| 4.1 | Memorandum of Association (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form F-1 (File No. 333-165823) filed March 31, 2010). |
| 4.2 | Amended and Restated Bye-laws (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-34717) filed November 12, 2015). |
| 4.3 | Form of Common Share Certificate (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form F-1 (File No. 333-165823) filed March 31, 2010). |
| 4.4 | Form of Warrant Agreement for Common Shares, including form of Warrant. (1) |
| 4.5 | Form of Warrant Agreement for Preferred Shares, including form of Warrant. (1) |
| 4.6 | Form of Warrant to Purchase Common Shares (included in Exhibit 4.4). (1) |
| 4.7 | Form of Warrant to Purchase Preferred Shares (included in Exhibit 4.5). (1) |
| 4.8 | Certificate of Designation of Preferred Shares. (1) |
| 4.9 | Form of Preferred Share Certificate. (1) |
| 4.10 | Form of Senior Debt Indenture. |
| 4.11 | Form of Senior Debt Security. (1) |
| 4.12 | Form of Subordinated Debt Indenture. |
| 4.13 | Form of Subordinated Debt Security. (1) |
| 5.1 | Opinion of Conyers Dill & Pearman. |
| 12.1 | Computation of Ratio of Earnings to Fixed Charges. |
| 23.1 | Consent of Conyers Dill & Pearman (included in Exhibit 5.1). |
| 23.2 | Consent of independent registered public accounting firm. |
| 24.1 | Power of Attorney (included on the signature page of this registration statement). |
| 25.1 | Form T-1 Statement of Eligibility of Trustee for Senior Debt Indenture under the Trust Indenture Act of 1939, as amended. (1) |
| 25.2 | Form T-1 Statement of Eligibility of Trustee for Subordinated Debt Indenture under the Trust Indenture Act of 1939, as amended. (1) |

(1) To be filed by amendment or by a Current Report on Form 8-K, or where applicable, incorporated by reference from a subsequent filing in accordance with section 305(b)(2) of the Trust Indenture Act of 1939, as amended, if the registrant enters into any such agreement or issues any such instrument in connection with the offer of any securities registered hereunder.

ITEM 17. 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;

To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective 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 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(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) of this section do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed A. 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 the registration statement; and

Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is B. contained in 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 the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective (2) 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.

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

That, for the purpose of determining liability under the Securities Act of 1933, if the registrant is relying on Rule (4) 430B of the Securities Act of 1933,

(i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i)(x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule

(ii) 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference

into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, in a primary offering of securities of the undersigned registrant pursuant to (5) this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

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 this registration statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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 SEC such indemnification is against public policy as expressed in the Securities Act of 1933 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.

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 will be deemed to be part of this registration statement as of the time it was declared effective.

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

The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of (e)the trustee to act under subsection (a) of section 310 of the Trust Indenture Act (“Act”) in accordance with the rules and regulations prescribed by the Commission under section 305(b)(2) of the Act.

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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 the requirements for filings on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Sunnyvale, California, on this 17th date of November 2016.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED

By: /s/ Mike F. Chang

Mike F. Chang

Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appear below constitutes and appoints Mike F. Chang and Yifan Liang, and each or any one of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and any and all amendments thereto, and to file the same, with all exhibits thereto, and the other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, 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 to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes or substitute, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

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| Signature | Title | Date |
|--|---|-------------------|
| /s/ Mike F. Chang Mike F. Chang, Ph.D. | Chairman of the Board and Chief Executive Officer (Principal Executive Officer) | November 17, 2016 |
| /s/ Yifan Liang Yifan Liang | Chief Financial Officer and Corporate Secretary (Principal Financial Officer and Principal Accounting Officer) | November 17, 2016 |
| /s/ Yueh-Se Ho Yueh-Se Ho, Ph.D. | Director and Chief Operating Officer | November 17, 2016 |
| /s/ Lucas S. Chang Lucas S. Chang, Ph.D. | Director | November 17, 2016 |
| /s/ Robert I. Chen Robert I. Chen | Director | November 17, 2016 |
| /s/ Michael L. Pfeiffer Michael L. Pfeiffer | Director | November 17, 2016 |
| /s/ King Owyang King Owyang | Director | November 17, 2016 |
| /s/ Michael L. Salameh Michael L. Salameh | Director | November 17, 2016 |

INDEX TO EXHIBITS

| Exhibit No. | Exhibit Title |
|-------------|--|
| 1.1 | Form of Underwriting Agreement for Common Shares. (1) |
| 1.2 | Form of Underwriting Agreement for Preferred Shares. (1) |
| 1.3 | Form of Underwriting Agreement for Senior and Subordinated debt securities. (1) |
| 4.1 | Memorandum of Association or Registrant (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form F-1 (File No. 333-165823) filed March 31, 2010). |
| 4.2 | Amended and Restated Bye-laws (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-34717) filed November 12, 2015). |
| 4.3 | Form of Common Share Certificate (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form F-1 (File No. 333-165823) filed March 31, 2010). |
| 4.4 | Form of Warrant Agreement for Common Shares, including form of Warrant. (1) |
| 4.5 | Form of Warrant Agreement for Preferred Shares, including form of Warrant. (1) |
| 4.6 | Form of Warrant to Purchase Common Shares (included in Exhibit 4.4). (1) |
| 4.7 | Form of Warrant to Purchase Preferred Shares (included in Exhibit 4.5). (1) |
| 4.8 | Certificate of Designation of Preferred Shares. (1) |
| 4.9 | Form of Preferred Share Certificate. (1) |
| 4.10 | Form of Senior Debt Indenture. |
| 4.11 | Form of Senior Debt Security (1). |
| 4.12 | Form of Subordinated Debt Indenture. |
| 4.13 | Form of Subordinated Debt Security (1). |
| 5.1 | Opinion of Conyers Dill & Pearman. |
| 12.1 | Computation of Ratio of Earnings to Fixed Charges. |
| 23.1 | Consent of Conyers Dill & Pearman (included in Exhibit 5.1). |
| 23.2 | Consent of independent registered public accounting firm. |
| 24.1 | Power of Attorney (included on the signature page of this registration statement). |
| 25.1 | Form T-1 Statement of Eligibility of Trustee for Senior Debt Indenture under the Trust Indenture Act of 1939, as amended. (1) |
| 25.2 | Form T-1 Statement of Eligibility of Trustee for Subordinated Debt Indenture under the Trust Indenture Act of 1939, as amended. (1) |

(1) To be filed by amendment or by a Current Report on Form 8-K, or where applicable, incorporated by reference from a subsequent filing in accordance with section 305(b)(2) of the Trust Indenture Act of 1939, as amended, if the registrant enters into any such agreement or issues any such instrument in connection with the offer of any securities registered hereunder.