

TOWER SEMICONDUCTOR LTD  
Form S-8  
May 17, 2011

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Registration No. 333-

As filed with the Securities and Exchange Commission on May 17, 2011

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SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM S-8

REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

TOWER SEMICONDUCTOR LTD.  
(Exact name of Registrant as specified in its charter)

Israel  
(State or other jurisdiction of incorporation or  
organization)

Not Applicable  
(I.R.S. Employer Identification No.)

P.O. Box 619  
Migdal Haemek, Israel, 23105  
972-4-650-6611  
(Address and telephone number of Registrant's principal executive offices)

2009 Employee Share Incentive Plan  
2009 Chairman Share Incentive Plan  
(Full title of plans)

Tower Semiconductor USA  
4300 Stevens Creek Blvd., Suite 175  
San Jose, California 95129  
Tel: 408-551-6500  
Facsimile: 408-551-6509  
(Name, address and telephone number of agent for service)

Copies of all Correspondence to:

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New York, NY 10017  
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## 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, par value NIS 1.00 per share ("Ordinary Shares") (relating to 2009 Employee Share Incentive Plan)	8,500,000 (2)	\$ 0.29 (3)	\$ 2,465,000	\$ 286.19
Ordinary Shares, par value NIS 1.00 per share ("Ordinary Shares") (relating to 2009 Employee Share Incentive Plan)	19,792,881 (4)	\$ 1.26 (5)	\$ 24,939,030	\$ 2,895.42
Ordinary Shares, par value NIS 1.00 per share ("Ordinary Shares") (relating to 2009 Chairman of the Board of Directors Share Incentive Plan)	11,500,000 (6)	0.29 (3)	\$ 3,335,000	\$ 387.19
<b>TOTAL:</b>			\$ 30,739,030	\$ 3,568.80

- (1) This Registration Statement also registers an indeterminate number of Ordinary Shares which may become issuable pursuant to the adjustment and anti-dilution provisions of the plans and options to which this Registration Statement relates.
- (2) Represents shares that may be issued pursuant to options which have been granted to the Registrant's Chief Executive Officer pursuant to the Registrant's 2009 Employee Share Incentive Plan.
- (3) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(h) under the Securities Act of 1933, based upon a Proposed Maximum Offering Price Per Share of \$0.29, which is the exercise price per share of such options.
- (4) Represents shares that may be issued pursuant to options which may in the future be granted to the Registrant's Chief Executive Offer pursuant to the Registrant's 2009 Employee Share Incentive Plan.
- (5) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(h) under the Securities Act of 1933, based upon the average of the high and low prices of the Registrant's Ordinary Shares on the Nasdaq Global Market on May 13, 2011.
- (6) Represents shares that may be issued pursuant to options which have been granted to the Registrant's Chairman of the Board pursuant to the Registrant's 2009 Chairman Share Incentive Plan.

As permitted by Rule 429 under the Securities Act of 1933, this registration statement contains a combined resale prospectus that relates to ordinary shares covered by this registration statement as well as ordinary shares covered by prior registration statements on Form S-8, No. 333-166428, filed by the registrant on April 30, 2010, No. 333-153710, filed by the registrant on September 29, 2008, No. 333-147071, filed by the Registrant on November 1, 2007, No. 333-138837, filed by the registrant on November 20, 2006 and No. 333-83204, filed by the registrant on February 21, 2002. Upon effectiveness, this registration statement will serve as a post-effective amendment to such prior registration statements.

## EXPLANATORY NOTE

This Registration Statement on Form S-8 filed by Tower Semiconductor Ltd., a company organized under the laws of the State of Israel (the “Registrant”), is being filed to register 28,292,881 shares that may be issued pursuant to options which have been granted, or may in the future be granted to the Registrant’s Chief Executive Officer, pursuant to the Registrant’s 2009 Employee Share Incentive. As of the date hereof, options to purchase 8,500,000 shares had been granted to the Registrant’s Chief Executive Officer under the 2009 Employee Share Incentive Plan and options to purchase up to an additional 19,792,881 shares may be granted to him in the future under the Plan. This Registration Statement also is being filed to register 11,500,000 shares that may be issued pursuant to options that have been granted to the Registrant’s Chairman under the 2009 Chairman Share Incentive Plan, representing all of the options which may be granted under such Plan.

The documents containing the information specified in Part I of this Registration Statement on Form S-8 will be sent or given to participants in the Plan as specified by Rule 428(b)(i) under the Securities Act of 1933, as amended (the “Securities Act”). Such documents are not required to be, and are not being, filed by us with the Securities and Exchange Commission (“SEC”), either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act. Such documents, together with the documents incorporated by reference herein pursuant to Item 3 of Part II of this Registration Statement on Form S-8, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

As used herein or any in any document incorporated by reference hereto, the “Company”, “Tower Semiconductor Ltd.”, “Registrant”, “we”, “us”, or “our” refers to Tower Semiconductor Ltd. and its consolidated subsidiaries.

## PART I

### INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

As permitted by the rules of the Securities and Exchange Commission, this Registration Statement omits the information specified in Part I of Form S-8.

## PART II

### INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

#### Item 3. Incorporation of Documents By Reference.

The following documents filed with the SEC by the Registrant pursuant to the Securities Exchange Act of 1934 are incorporated by reference in this registration statement:

- Annual Report on Form 20-F for the fiscal year ended December 31, 2010 (filed on May 17, 2011); and
- The description of the Company's Ordinary Shares which is contained in its Registration Statement on Form 8-A declared effective on October 25, 1994.

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all shares offered hereby have been sold or which deregisters all then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. We may also incorporate any Form 6-K subsequently filed or furnished by us to the SEC prior to the filing of any such post-effective amendment, by

identifying in such Form 6-K that it is being incorporated by reference herein, and any Forms 6-K so identified shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. 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 other subsequently filed document which also is incorporated or 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.

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Item 6. Indemnification of Directors and Officers.

The Israeli Companies Law-1999, or the Companies Law, provides that a company may include in its articles of association provisions allowing it to:

1. partially or fully, exempt in advance, an office holder of the company from his responsibility for damages caused by the breach of his duty of care to the company, except for damages caused to the Company due to any breach of such Office Holder's duty of care towards the company in a "distribution" (as defined in the Companies Law).

2. enter into a contract to insure the liability of an office holder of the company by reason of acts or omissions committed in his capacity as an office holder of the company with respect to the following:

(a) the breach of his duty of care to the company or any other person;

(b) the breach of his fiduciary duty to the company to the extent he acted in good faith and had a reasonable basis to believe that the act or omission would not prejudice the interests of the company; and

(c) monetary liabilities or obligations which may be imposed upon him in favor of other persons.

3. indemnify an office holder of the company for:

(a) monetary liabilities or obligations imposed upon, or actually incurred by, such officer holder in favor of other persons pursuant to a court judgment, including a compromise judgment or an arbitrator's decision approved by a court, by reason of acts or omissions of such officer holder in his or her capacity as an office holder of the company;

(b) reasonable litigation expenses, including attorney's fees, actually incurred by such office holder or imposed upon him or her by a court, in an action, suit or proceeding brought against him or her by or on behalf of us or by other persons, or in connection with a criminal action from which he or she was acquitted, or in connection with a criminal action which does not require criminal intent in which he was convicted, in each case by reason of acts or omissions of such officer holder in his or her capacity as an office holder; and

(c) reasonable litigation expenses, including attorneys' fees, actually incurred by such office holder due to an investigation or a proceeding instituted against such office holder by an authority competent to administrate such an investigation or proceeding, and that was finalized without the filing of an indictment against such office holder and without any financial obligation imposed on such office holder in lieu of criminal proceedings, or that was finalized without the filing of an indictment against such office holder but with financial obligation imposed on such office holder in lieu of criminal proceedings of a crime which does not require proof of criminal intent, in each case by reason of acts of such officer holder in his or her capacity as an office holder of the company.

The Companies Law provides that a company's articles of association may provide for indemnification of an office holder post-factum and may also provide that a company may undertake to indemnify an office holder in advance, as described in:

i. sub-section 3(a) above, provided such undertaking is limited to and actually sets forth the occurrences, which, in the opinion of the company's board of directors based on the current activity of the company, are, at the time such undertaking is provided, foreseeable, and to an amount and degree that the board of directors has determined is reasonable for such indemnification under the circumstances; and



- ii. sub-sections 3(b) and 3(c) above.

The Companies Law provides that a company may not indemnify or exempt the liabilities of an office holder or enter into an insurance contract which would provide coverage for the liability of an office holder with respect to the following:

- o a breach of his fiduciary duty, except to the extent described above;
- o a breach of his duty of care, if such breach was done intentionally, recklessly or with disregard of the circumstances of the breach or its consequences, but excluding a breach due to negligence only;
- o an act or omission done with the intent to unlawfully realize personal gain; or
- o a fine or monetary settlement imposed upon him.

Under the Companies Law, the term "office holder" may include a director, managing director, general manager, chief executive officer, executive vice president, vice president, other managers directly subordinate to the managing director and any other person fulfilling or assuming any such position or responsibility without regard to such person's title.

The grant of an exemption, an undertaking to indemnify or indemnification of, and procurement of insurance coverage for, an office holder of a company requires, pursuant to the Companies Law, the approval of our audit committee, or, following May 14, 2011 (the effective date of a new amendment to the Companies Law), of a special compensation committee to the extent that such committee complies with the statutory requirements which apply to the audit committee, and board of directors, and, in certain circumstances, including if the office holder is a director, the approval of our shareholders in addition to the approval of the audit committee and board of directors.

We have entered into an insurance contract for directors and officers and have procured indemnification insurance for our office holders to the extent permitted by our Articles of Association.

We have also entered into indemnification agreements with certain of our directors and officers to the extent permitted by our Articles of Association. The indemnification agreements provide that, subject only to mandatory provisions of applicable law to the contrary, we will indemnify such individuals against the obligations and expenses described above with respect to acts performed in the capacity of an office holder, subject, in certain instances, to (i) the obligation or expense being imposed or expended in connection with a specified event; and (ii) a specific cap. The indemnification agreements also exempt such individuals from liability for damage caused or to be caused to us as a result of a breach of such individual's duty of care, subject only to mandatory provisions of applicable law to the contrary.

Item 7. Exemption From Registration Claimed.

Not applicable.



Item 8. Exhibits.

Exhibit Numbers	Description of Document
3.1	Articles of Association of the Registrant, approved by shareholders on November 14, 2000, as amended (incorporated by reference to Exhibit 3.1 of the Registrant's Registration Statement on Form F-1, File No. 333-126909)
3.2	Amendment to the Articles of Association of the Registrant (approved by shareholders on December 7, 2003) (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-8, File No. 333-117565)
3.3	Amendment to Articles of Association of the Registrant (approved by shareholders on September 28, 2006) (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-8, File No. 333-138837)
3.4	Amendment to Articles of Association of Registrant (approved by shareholders on September 24, 2008) (incorporated by reference to Exhibit 3.4 of the Registrant's Registration Statement on Form S-8, File No. 333-153710)
4.1	2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.2	Form of Grant Letter to Israeli Employees for the 2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.3	Form of Grant Letter to U.S. Employees for the 2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.3 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.4	Form of Grant Letter to non-Israeli/non-U.S. Employees for the 2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.4 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.5	2009 Chairman Share Incentive Plan (incorporated by reference to Exhibit 4.20 of the Registrant's Annual Report on Form 20-F for the fiscal year ended December 31, 2010 (filed on May 17, 2011)
5.1	Opinion of Yigal Arnon & Co.
23.1	Consent of Yigal Arnon & Co. (contained in their opinion constituting Exhibit 5.1)
23.2	Consent of Brightman Almagor Zohar & Co.

24.1 Power of Attorney (included on signature page)

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;

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- ii. 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 hereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this 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% 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 this Registration Statement or any material change to such information in this 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 herein, 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.

(4) 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: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to 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.

(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 this 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 such Act and will be governed by the final adjudication of such issue.

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PROSPECTUS

35,811,813 Ordinary Shares

This Prospectus relates to the resale, from time to time, our Chief Executive Officer, our Chairman of the Board and certain of our directors named herein under the caption "Selling Shareholders" (the "Selling Shareholders") to the public of up to 35,811,813 of our ordinary shares, par value NIS 1.00 per share ("Ordinary Shares"), which may be acquired by the Selling Shareholders through the exercise of stock options granted to them by our Board of Directors, or a committee appointed by the board. See "Selling Shareholders."

The Selling Shareholders may sell all or any portion of these ordinary shares in one or more transactions through (i) Nasdaq, the Tel Aviv Stock Exchange, in the over-the-counter market, in privately negotiated transactions or otherwise; (ii) directly to purchasers or through agents, brokers, dealers or underwriters; (iii) at market prices prevailing at the time of sale, at prices related to such prevailing market prices, or at negotiated prices; or (iv) or any other means described in the section entitled "Plan of Distribution."

Our ordinary shares are listed on the Nasdaq Global Market under the symbol "TSEM" and on the Tel Aviv Stock Exchange in Israel under the symbol "TSEM." On May 13, 2011, the last reported sale price of our ordinary shares on the Nasdaq Global Market was \$1.26 per share. On May 15, 2011, the last reported sale price of our ordinary shares on the Tel Aviv Stock Exchange was NIS 4.27 per share.

The securities offered hereby involve a high degree of risk. See "Risk Factors" beginning on page 2.

None of the U.S. Securities and Exchange Commission, the Israeli Securities Authority or any state securities commission have approved or disapproved of these securities or passed upon the adequacy, completeness or accuracy of this prospectus. Any representation to the contrary is a criminal offense under the laws of the United States and the laws of the State of Israel.

The date of this prospectus is May 17, 2011

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## ABOUT TOWER SEMICONDUCTOR LTD.

We are a pure-play independent specialty wafer foundry dedicated to the manufacture of semiconductors. Typically, pure-play foundries do not offer products of their own, but focus on producing integrated circuits, or ICs, based on the design specifications of their customers. We manufacture semiconductors for our customers, generally using the customer's proprietary circuit designs. In some cases, we use third-party or our own proprietary design elements. We currently offer the manufacture of ICs with geometries ranging from 1.0 to 0.13-micron. We also provide design services and complementary technical services. We provide wafer fabrication services to fabless IC companies and IDMs and enable smooth integration of the semiconductor design and manufacturing processes. ICs manufactured by us are incorporated into a wide range of products in diverse markets, including consumer electronics, personal computers, communications, automotive, industrial and medical device products.

We are focused on establishing leading market share in high-growth specialized markets by providing our customers with high-value wafer foundry services. Our historical focus has been standard digital complementary metal oxide semiconductor ("CMOS") process technology, which is the most widely used method of producing ICs. We are currently focused on the emerging opportunities in the fields of CMOS image sensors, mixed-signal, radio frequency CMOS (RFCMOS), bipolar CMOS (BiCMOS), and silicon-germanium BiCMOS (SiGe BiCMOS or SiGe), high voltage CMOS, radio frequency identification (RFID) technologies and power management. To better serve our customers, we have developed and are continuously expanding our technology offerings in these fields. Through our expertise and experience gained over seventeen years of operation, we differentiate ourselves by creating a high level of value for our clients through innovative technological processes, design and engineering support and services, competitive manufacturing indices, and dedicated customer service.

In September 2008, we completed the merger with Jazz Technologies, Inc. ("Jazz Technologies"), the sole stockholder of Jazz Semiconductor, Inc. ("Jazz Semiconductor"), an independent semiconductor foundry focused on specialty process technologies for the manufacture of analog intensive mixed-signal semiconductor devices. As a result of this transaction, Jazz Technologies became a wholly owned subsidiary of Tower.

We currently operate three manufacturing facilities—our Fab 1 and Fab 2 facilities in Israel and our Jazz facility in Newport Beach, California. The capacity in each of our facilities at any particular time is variable and depends on the combination of the processes being used and the product mix being manufactured. Hence, it may be significantly lower at certain times as a result of certain of our combinations that may require more processing steps than others. We have the ability to rapidly change the mix of production processes in use in order to respond to changing customer needs and maximize utilization of the fab. In general, our ability to increase our manufacturing capacity has been achieved through the addition of equipment, improvement in equipment utilization, the reconfiguration and expansion of the existing clean room area and the construction of an additional clean room area.

Our executive offices are located in the Ramat Gavriel Industrial Park, Post Office Box 619, Migdal Haemek, 23105 Israel, and our telephone number is 972-4-650-6611.

Additional information about us and our operations may be found at our web site: [www.towerjazz.com](http://www.towerjazz.com). Information on our website is not incorporated by reference in this prospectus.

## RISK FACTORS

An investment in our securities is speculative and involves a high degree of risk. Therefore, you should not invest in our securities unless you are able to bear a loss of your entire investment. You should carefully consider the risk factors described in our periodic reports filed with the SEC, including those specified in our Annual Report on Form 20-F for the fiscal year ended December 31, 2010 (filed on May 17, 2011) in the section captioned "Risk Factors", which is incorporated by reference in this prospectus. You should carefully consider those risks together with the other information in this prospectus before deciding to invest in our securities. If any of those risks actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our ordinary shares could decline, and you may lose all or part of your investment.



## CAPITALIZATION

The following table sets forth our long-term debt, debentures and capitalization as of December 31, 2010 on an actual basis. This table was prepared in accordance with US GAAP and the financial data is derived from our consolidated financial statements as of December 31, 2010.

(US dollars in thousands)

Short term bank debt and current maturities of debentures	\$ 122,179
Long-term loans from banks	111,882
Debentures	247,598
Long-term customers' advances	9,257
Other long-term liabilities	65,187
Shareholders' equity:	
Ordinary Shares, NIS 1.00 par value per share; 1,100,000,000 authorized shares, 266,836,511 issued shares* and 265,536,511 outstanding shares	\$ 68,053
Additional paid-in capital	770,987
Capital notes	311,472
Cumulative stock based compensation	28,982
Accumulated other comprehensive loss	(829 )
Accumulated deficit	(1,051,811)
Treasury stock, 1,300,000 shares	(9,072 )
Total shareholders' equity	117,782
Total capitalization	\$ 801,728

\*Includes 1,300,000 treasury shares

The information set forth on an actual basis in the foregoing table excludes the following securities as of March 31, 2011

- (i) approximately 29.5 million ordinary shares issuable upon exercise of options granted to employees and directors at a weighted average exercise price of \$1.19;
- (ii) 23.4 million ordinary shares issuable upon exercise of options granted to our Chief Executive Officer at a weighted average exercise price of \$1.15;
- (iii) 11.5 million ordinary shares issuable upon exercise of options granted to our Chairman of the Board at an exercise price of \$0.29;
- (iv) 2.5 million ordinary shares issuable upon exercise of warrants issued to our banks with an exercise price of \$2.04 per share exercisable until December 2015;
- (v) 0.9 million ordinary shares issuable upon exercise of warrants issued to our banks in connection with our credit facility with an exercise price of \$6.17 per share exercisable until December 2015;
- (vi) 1.1 million ordinary shares issuable upon exercise of warrants issued to our bank in connection with our credit facility with an exercise price of \$0.89 per share exercisable until December 2015;



- (vii) 21.6 million ordinary shares issuable upon conversion of our debentures convertible series E until January 2013, issued pursuant to our June 2007 public offering in Israel at conversion rate of approximately \$1.10;
- (viii) 4.1 million ordinary shares issuable upon exercise of warrants we issued to our bank with an exercise price of \$1.21 in connection with the July 2005 amendment to our facility agreement exercisable until December 2015;
- (ix) 9.4 million ordinary shares issuable upon conversion of our debentures convertible series B until January 2012, pursuant to the prospectus dated December 15, 2005 at conversion rate of \$1.10;
- (x) 96.4 million ordinary shares issuable upon conversion of the equity equivalent convertible capital notes we issued to each of our two banks and 206.1 million shares issuable upon conversion of such notes issued to Israel Corp.;
- (xi) 8.0 million ordinary shares issuable upon exercise of warrants series 6, with an exercise price of \$1.06 per share and exercisable until August 2011;
- (xii) 28.5 million ordinary shares issuable upon conversion of our debentures convertible series C until December 2011, issued pursuant to our June 2006 public offering in Israel at conversion rate of approximately \$1.10;
- (xiii) 3.0 million ordinary shares issuable upon exercise of the warrants series I issued in our March 2007 private placement at exercise price of \$0.74 exercisable until March 2012;
- (xiv) 59.5 million ordinary shares issuable upon exercise of warrants, with an exercise price of approximately \$2.78 per share and exercisable until March 2011;
- (xv) 10.7 million ordinary shares issuable upon conversion of our debentures convertible until December 2011 at conversion rate of \$4.07;
- (xvi) 25.3 million ordinary shares issuable upon exercise of warrants series J covered by this prospectus, with an exercise price of \$1.70 per share and exercisable until June 2015; and
- (xvii) 61.5 million ordinary shares issuable upon conversion of our debentures convertible series F until December 2016 at conversion rate of approximately \$1.8.

This information does not take into account potential dilutive issuances of securities pursuant to our credit facility agreement and warrants issuable to our banks since the number of securities issuable will depend upon the market price of our shares.

#### USE OF PROCEEDS

We will not receive any proceeds from the sale of ordinary shares by the selling shareholders. All net proceeds from the sale of the ordinary shares covered by this prospectus will go to the selling shareholders. Upon exercise by payment of cash of any options whose underlying shares are covered hereby, we will receive the exercise price of the options. If all of such options granted as of the date of this prospectus are exercised for cash, we will receive approximately \$5.8 million. We expect to use the proceeds we receive from the exercise of options, if any, for general working capital purposes.

We have agreed to bear all expenses relating to the registration of the securities registered pursuant to this prospectus.



## PLAN OF DISTRIBUTION

The selling shareholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling ordinary shares or interests in ordinary shares received after the date of this prospectus from a selling shareholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their ordinary shares or interests in ordinary shares on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling shareholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the date the registration statement of which this Prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling shareholders to sell a specified number of such shares at a stipulated price per share; and
- a combination of any such methods of sale, or any other methods permitted by applicable law.

The selling shareholders may, from time to time, pledge or grant a security interest in some or all of the ordinary shares owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the ordinary shares, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling shareholders to include the pledgee, transferee or other successors in interest as selling shareholders under this prospectus. The selling shareholders also may transfer the ordinary shares in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our ordinary shares or interests therein, the selling shareholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the ordinary shares in the course of hedging the positions they assume. The selling shareholders may also sell our ordinary shares short and deliver these securities to close out their short positions and to return borrowed shares in connection with such short sales, or loan or pledge the ordinary shares to broker-dealers that in turn may sell these securities. The

selling shareholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling shareholders from the sale of the ordinary shares offered by them will be the purchase price of the ordinary shares less discounts or commissions, if any. Each of the selling shareholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of ordinary shares to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of options by the selling shareholders, however, we will receive the exercise price of the options.

The selling shareholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling shareholders and any underwriters, broker-dealers or agents that participate in the sale of the ordinary shares or interests therein may be deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be deemed to be underwriting discounts and commissions under the Securities Act. At the time a particular offering of the ordinary shares is made, a prospectus supplement, if required (or if appropriate, a post-effective amendment to this registration statement which includes this prospectus), will be filed, which will set forth the aggregate amount of ordinary shares being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling shareholders and any discount, commissions or concessions allowed or reallocated or paid to broker-dealers.

Under the securities laws of some states, the ordinary shares may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the ordinary shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling shareholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling shareholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling shareholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling shareholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling shareholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling shareholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) the date on which the shares may be sold pursuant to Rule 144(k) of the Securities Act.

Expenses of the Offering

We have incurred, or expect to incur, the following estimated expenses in connection with the sale of the securities covered by this prospectus:

Securities and Exchange Commission Registration Fees	\$3,568.80
Legal fees and expenses	\$10,000
Miscellaneous	\$2,000
Total	\$15,568.80

SELLING SHAREHOLDERS

Beneficial ownership and other information.

The selling shareholders acquired, or may hereafter acquire, the ordinary shares being offered hereby pursuant to the exercise of options granted under our CEO Share Option Plan 2005, Non-Employee Directors Share Option Plan 2001 (also referred to as 2001/4 Plan), Independent Directors Share Option Plan 2007, 2009 Employee Share Incentive Plan or 2009 Chairman Share Incentive Plan.

Mr. Russell C. Ellwanger is our Chief Executive Officer, who also serves as a director, and may be considered an affiliate of our company. Amir Elstein is the chairman of our board of directors and Ron Moskowitz, Kalman Kaufman, Alex Kornhauser, Rami Guzman, Dana Gross, Nir Gilad and Ilan Flato serve as directors on our board of directors.

The address for each of the selling shareholders is c/o Tower Semiconductor Ltd., P.O. Box 619, Ramat Gavriel Industrial Park, Migdal Haemek 23105, Israel.

Nothing in this Registration Statement shall be construed as an admission that any selling shareholder is the beneficial owner of any of our securities, other than the securities held directly by such party, nor that any selling shareholder or other persons or entities constitute a "group", for purposes of Section 13(d) of the Exchange Act and the rules promulgated thereunder.

The following table assumes that each selling shareholder will sell all of the securities owned by it and covered by this prospectus. Information included in the table is based upon information provided by the selling shareholders. Our registration of these securities does not necessarily mean that the selling shareholders will sell any or all of the securities.

Except as otherwise noted below none of the selling shareholders are broker-dealers or affiliates of broker-dealers.



Name and Address of Selling Shareholder	Shares Beneficially Owned Prior to Offering/ Percentage of Class1	Shares Being Offered	Shares Beneficially Owned Upon Completion of Offering / Percentage of Class
Russell C. Ellwanger	23,361,813/ 7.55 %	23,361,813	0 %
Amir Elstein	11,500,000/ 3.86 %	11,500,000	0 %
Kalman Kaufman	310,000/ 0.11 %	310,000	0 %
Ron Moskowitz	40,000/ 0.01 %	40,000	0 %
Alex Kornhauser	150,000/ 0.05 %	150,000	0 %
Rami Guzman	150,000/ 0.05 %	150,000	0 %
Dana Gross	150,000/ 0.05 %	150,000	0 %
Ilan Flato	150,000/ 0.05 %	150,000	0 %

1 Beneficial ownership is calculated as of March 31, 2011 in accordance with General Instruction F. to Form 20-F, except that shares underlying all options covered by this Prospectus (both vested and unvested) are reflected as beneficially owned, and is based on 286,047,937 ordinary shares outstanding.

#### DESCRIPTION OF SHARE CAPITAL

##### Ordinary Shares

Our authorized share capital consists of 1,100,000,000 ordinary shares, par value NIS 1.00 per share. Under our articles of association, the ordinary shares do not have preemptive rights. We may from time to time, by approval of a majority of our shareholders, increase our authorized share capital. All ordinary shares are registered shares, rather than bearer shares.

The ownership or voting rights of our ordinary shares by non-residents of Israel is not restricted in any way by our memorandum of association or articles of association. The State of Israel does not restrict in any way the ownership or voting rights of ordinary shares of Israeli entities by non-residents of Israel, except with respect to subjects of countries that are in a state of war with Israel. Our ordinary shares do not have cumulative voting rights for the election of directors. The affirmative vote of the shareholders present in person or by proxy that represent more than 50% of the voting power present in person or by proxy have the power to elect all nominees up for election to our board of directors.

In the event of our liquidation, after satisfaction of liabilities to creditors, our assets will be distributed to the holders of our ordinary shares in proportion to the nominal value of their respective holdings. This liquidation right may be affected by the grant of a preferential dividend or distribution right to the holder of a class of shares with preferential rights that may be authorized in the future. Dividends may be paid only out of profits, as defined in the Israeli

Companies Law. Our Board of Directors is authorized to declare dividends, although our bank covenants currently in effect prohibit the payment of dividends on our ordinary shares, unless such payments are approved by our banks.

Holders of ordinary shares have one vote for each ordinary share held on all matters submitted to a vote of shareholders. Subject to the provisions set forth in Section 46B of the Israeli Securities Law, these voting rights may be affected by the grant of any special voting rights to the holders of a class of shares with preferential rights that may be authorized in the future. Our major shareholders do not have different voting rights from each other or other shareholders.

Resolutions of shareholders (e.g. resolutions amending our articles of association, electing or removing directors, appointing an independent registered public accounting firm, authorizing changes in capitalization or the rights attached to our shares or approving a wind-up or merger) require the affirmative vote (at a meeting convened upon advance notice of no less than twenty one days) of shareholders present in person or by proxy and holding shares conferring, in the aggregate, at least a majority of the votes actually cast on such resolutions.

The quorum required for a meeting of shareholders is at least two shareholders present, in person or by proxy, within half an hour of the time fixed for the meeting's commencement that together hold shares conferring in the aggregate more than 33% of the total voting power of our shares. A meeting adjourned for lack of a quorum is adjourned to the same day in the following week at the same time and place. At the reconvened meeting, in the event a quorum is not present within half an hour of the time fixed for the meetings commencement, the persons present shall constitute a quorum.

Our registration number at the Israeli Registrar of Companies is 52-004199-7.

The objective stated in our articles of association is to engage in any lawful activity.

Modification or abrogation of the rights of any existing class of shares requires either the written consent of all of the holders of the issued shares of such class or the adoption of a resolution by an ordinary majority of a general meeting of holders of such class. The quorum required for a class meeting is at least two shareholders present, in person or by proxy, within half an hour of the time fixed for the meetings commencement that together hold shares conferring in the aggregate at least 51% of the total voting power of the issued shares of such class. If no quorum is present, the meeting shall be adjourned to another time and at the adjourned meeting a quorum shall be constituted in the presence of any number of participants, regardless of the number of shares held by them.

As of March 31, 2011, 286,047,937 of our ordinary shares were outstanding. The above numbers of outstanding ordinary shares do not include 1.3 million treasury shares held by us through a trustee.

The transfer agent and registrar for our ordinary shares is American Stock Transfer & Trust Company, 59 Maiden Lane, New York, New York 10007.

#### FOREIGN EXCHANGE CONTROLS AND OTHER LIMITATIONS

Israeli law limits foreign currency transactions and transactions between Israeli and non-Israeli residents. The Controller of Foreign Exchange at the Bank of Israel, through "general" and "special" permits, may regulate or waive these limitations. In May 1998, the Bank of Israel liberalized its foreign currency regulations by issuing a new "general permit" providing that foreign currency transactions are generally permitted, although some restrictions still apply. Under the new general permit, all foreign currency transactions must be reported to the Bank of Israel, and a foreign resident must report to his financial mediator about any contract for which Israeli currency is being deposited in, or withdrawn from, his account.

The State of Israel generally does not restrict the ownership or voting of ordinary shares of Israeli entities by non-residents of Israel, except with respect to subjects of countries that are in a state of war with Israel.

#### TAXATION

The below discussion does not purport to be an official interpretation of the tax law provisions mentioned therein or to be a comprehensive description of all tax law provisions which might apply to our securities or to reflect the views of the relevant tax authorities, and it is not meant to replace professional advice in these matters. The below discussion is

based on current, applicable tax law, which may be changed by future legislation or reforms. Non-residents should obtain professional tax advice with respect to the tax consequences under the laws of their countries of residence of holding or selling our securities.

#### A. Israeli Capital Gains Tax

Until the end of the year 2002 and provided we maintained our status as an "Industrial Corporation", capital gains from the sale of our securities were generally exempt from Israeli Capital Gains Tax. This exemption did not apply to a shareholder whose taxable income was determined pursuant to the Israeli Income Tax Law (Inflationary Adjustments) 1985, or to a person whose gains from selling or otherwise disposing of our securities were deemed to be business income.

On January 1, 2006 an amendment to the Israeli tax regime became effective (the "2006 Tax Reform"). The 2006 Tax Reform significantly changed the tax rates applicable to income derived from shares.

According to the 2006 Tax Reform, an individual is subject to a 20% tax rate on real capital gains derived from the sale of shares, as long as the individual is not a "substantial shareholder" (generally a shareholder with 10% or more of the right to profits, right to nominate a director or voting rights) in the company issuing the shares.

A substantial shareholder will be subject to tax at a rate of 25% in respect of real capital gains derived from the sale of shares issued by the company in which he or she is a substantial shareholder. The determination of whether the individual is a substantial shareholder will be made on the date that the securities are sold. In addition, the individual will be deemed to be a substantial shareholder if at any time during the 12 months preceding this date he or she had been a substantial shareholder.

Corporations will be generally subject to corporate tax rates in respect of total income, including capital gains, with the corporate tax rate reduced gradually from 25% in 2010; the corporate tax rate is scheduled to be reduced each year thereafter until it reaches 18% in the year 2016.

Non-Israeli residents are exempt from Israeli capital gains tax on any gains derived from the sale of shares in an Israeli corporation publicly traded on the TASE and/or on a foreign stock exchange, provided such gains do not derive from a permanent establishment of such shareholders in Israel and that such shareholders did not acquire their shares prior to the issuer's initial public offering. However, non-Israeli corporations will not be entitled to such exemption if an Israeli resident (i) has a controlling interest of 25% or more in such non-Israeli corporation, or (ii) is the beneficiary of or is entitled to 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly.

In some instances where our shareholders may be liable to Israeli tax on the sale of their ordinary shares, the payment of the consideration may be subject to the withholding of Israeli tax at the source.

Pursuant to the treaty between the Governments of the United States and Israel with respect to taxes on income, or the U.S.-Israel tax treaty, the sale, exchange or disposition of our ordinary shares by a person who qualifies as a resident of the United States under the treaty and who is entitled to claim the benefits afforded to him by the treaty, will generally not be subject to Israeli capital gains tax. This exemption shall not apply to a person who held, directly or indirectly, shares representing 10% or more of the voting power in our company during any part of the 12-month period preceding the sale, exchange or disposition, subject to certain conditions. A sale, exchange or disposition of our shares by a U.S. resident qualified under the treaty, who held, directly or indirectly, shares representing 10% or more of the voting power in our company at any time during the preceding 12-month period would be subject to Israeli tax, to the extent applicable; however, under the treaty, this U.S. resident would be permitted, under certain conditions, to claim a credit for these taxes against the U.S. income tax with respect to the sale, exchange or disposition, subject to the limitations in U.S. laws applicable to foreign tax credits.



## B. Israeli Tax on Dividend Income

On distributions of dividends other than bonus shares, or stock dividends, to Israeli individuals and foreign resident individuals and foreign resident corporations we would be required to withhold income tax at the rate of 20%. If the income out of which the dividend is being paid is attributable to an Approved Enterprise under the Law for the Encouragement of Capital Investments, 1959, the rate is generally not more than 15%. A different rate may be provided for in a treaty between Israel and the shareholder's country of residence.

Under the US-Israel Tax Treaty, Israeli withholding tax on dividends paid to a US treaty resident may not, in general, exceed 25%, or 15% in the case of dividends paid out of the profits of an Approved Enterprise, subject to certain conditions. Where the recipient is a US corporation owning 10% or more of the voting stock of the paying corporation and the dividend is not paid from the profits of an Approved Enterprise, the Israeli tax withheld may not exceed 12.5%, subject to certain conditions.

Recently, new legislation amending the Investment Law was adopted. Under this new legislation, a uniform corporate tax rate will apply to all qualifying income of certain industrial Companies (requirement of a minimum export of 25% of the company's total turnover), as opposed to the current law's incentives, which are limited to income from Approved Enterprises during their benefits period. Under the new law, the uniform tax rate will be 10% in areas in Israel designated as Development Zone A and 15% elsewhere in Israel during 2011-2012, 7% and 12.5%, respectively, in 2013-2014, and 6% and 12%, respectively thereafter. The profits of these Industrial Companies will be freely distributable as dividends, subject to a 15% withholding tax (or lower, under an applicable tax treaty).

## D. PFIC Rules

A non-U.S. corporation will be classified as a passive foreign investment company, or a PFIC, for U.S. federal income tax purposes if either (i) 75% or more of its gross income for the taxable year is passive income, or (ii) on a quarterly average for the taxable year by value (or, if it is not a publicly traded corporation and so elects, by adjusted basis), 50% or more of its gross assets produce or are held for the production of passive income.

We do not believe that we satisfied either of the tests for PFIC status in 2010 or in any prior year. However, there can be no assurance that we will not be a PFIC in 2011 or a later year. If, for example, the "passive income" earned by us exceeds 75% or more of our "gross income", we will be a PFIC under the "income test". Passive income for PFIC purposes includes, among other things, gross interest, dividends, royalties, rent and annuities. The tests for determining PFIC status are applied annually and it is difficult to make accurate predictions of future income and assets, which are relevant to the determination of PFIC status.

If we were to be a PFIC at any time during a U.S. holder's holding period, such U.S. holder would be required to either: (i) pay an interest charge together with tax calculated at maximum ordinary income tax rates on "excess distributions," which is defined to include gain on a sale or other disposition of ordinary shares, or (ii) so long as the ordinary shares are "regularly traded" on a qualifying exchange, elect to recognize as ordinary income each year the excess in the fair market value, if any, of its ordinary shares at the end of the taxable year over such holder's adjusted basis in such ordinary shares and, to the extent of prior inclusions of ordinary income, recognize ordinary loss for the decrease in value of such ordinary shares (the "mark to market" election). For this purpose, the Nasdaq Global Market is a qualifying exchange. U.S. holders are strongly urged to consult their own tax advisers regarding the possible application and consequences of the PFIC rules.

## DIVIDEND POLICY

Since 1998, we have not declared or paid cash dividends on any of our shares and we have no current intention of paying any cash dividends in the future. The facility agreement that we entered into with our banks, as amended, prohibits the payment of dividends.

The Companies Law also restricts our ability to declare dividends. We can only distribute dividends from profits (as defined in the law), provided that there is no reasonable concern that the dividend distribution will prevent us from meeting our existing and future expected obligations as they come due.

## LEGAL MATTERS

The validity of the securities offered in this prospectus will be passed upon for us by Yigal Arnon & Co., our Israeli counsel. In addition, certain other matters in connection with this offering with respect to United States law will be passed upon for us by Eilenberg & Krause LLP, our U.S. counsel.

## EXPERTS

The audited consolidated financial statements incorporated in this prospectus by reference from the company's Annual Report on Form 20-F for the year ended December 31, 2010 have been audited by Brightman Almagor Zohar and & Co., a member firm of Deloitte Touche Tohmatsu, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference (and have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

## ENFORCEABILITY OF CIVIL LIABILITIES AND AGENT FOR SERVICE OF PROCESS IN THE UNITED STATES

We are incorporated in Israel, most of our executive officers and directors and the Israeli experts named herein are nonresidents of the United States, and a substantial portion of our assets and of such persons' are located outside the United States. Therefore, it may be difficult to enforce a judgment obtained in the United States, against us or any of these persons, in US or Israeli courts based on the civil liability provisions of the US federal securities laws, except to the extent that such judgment could be enforced in the U.S. against our U.S. subsidiaries. Additionally, it may be difficult for you to enforce civil liabilities under U.S. federal securities laws in original actions instituted in Israel.

## WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION OF INFORMATION BY REFERENCE

We have filed a registration statement on Form S-8 with the Securities and Exchange Commission in connection with this offering. In addition, we file reports with, and furnish information to, the Securities and Exchange Commission. You may read and copy the registration statement and any other documents we have filed at the Securities and Exchange Commission, including any exhibits and schedules, at the Securities and Exchange Commission's public reference room at 100 F Street N.E., Washington, D.C. 20549. You may call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on this public reference room. As a foreign private issuer, all documents which were filed after November 4, 2002 on the Securities and Exchange Commission's EDGAR system are available for retrieval on the Securities and Exchange Commission's website at [www.sec.gov](http://www.sec.gov). These Securities and Exchange Commission filings are also available to the public on the Israel Securities Authority's Magna website at [www.magna.isa.gov.il](http://www.magna.isa.gov.il) and from commercial document retrieval services. We also generally make available on our own web site ([www.towersemi.com](http://www.towersemi.com)) our quarterly and year-end financial statements as well as other information.





This prospectus is part of the registration statement and does not contain all of the information included in the registration statement. Whenever a reference is made in this prospectus to any of our contracts or other documents, the reference may not be complete and, for a copy of the contract or document, you should refer to the exhibits that are a part of the registration statement.

The Securities and Exchange Commission allows us to "incorporate by reference" into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. Information incorporated by reference is part of this prospectus. The following documents filed with the Securities and Exchange Commission by our company are incorporated by reference in this registration statement:

- Annual report on Form 20-F for the year ended December 31, 2010, filed on May 17, 2011, to the extent the information in that report has not been updated or superseded by this prospectus;
- The description of the Company's Ordinary Shares which is contained in its Registration Statement on Form 8-A declared effective on October 25, 1994.

All subsequent annual reports filed by our company pursuant to the Exchange Act on Form 20-F prior to the termination of the offering shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing of such documents. We may also incorporate any Form 6-K subsequently submitted by us to the Commission prior to the termination of the offering by identifying in such Forms 6-K that they are being incorporated by reference herein, and any Forms 6-K so identified shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing of such documents. 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 prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or 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 prospectus.

We will provide to each person, including any beneficial owner, to whom this prospectus is delivered, a copy of these filings, at no cost, upon written or oral request to us at: Ramat Gavriel Industrial Park, Post Office Box 619, Migdal Haemek, 23105 Israel, Attn: Corporate Secretary, telephone number: 972-4-650-6611. Copies of these filings may also be accessed at our website, [www.towerjazz.com](http://www.towerjazz.com). Click on "Investor Relations" and then "Filings."

A copy of this prospectus, our memorandum of association and our articles of association, are available for inspection at our offices at Hamada Avenue, Ramat Gavriel Industrial Park, Migdal Haemek, Israel and on the Israel Securities Authority's Magna website, [www.magna.isa.gov.il](http://www.magna.isa.gov.il).

As a foreign private issuer, we are exempt from the rules under Section 14 of the Exchange Act prescribing the furnishing and content of proxy statements and our officers, directors and principal shareholders are exempt from the reporting and other provisions in Section 16 of the Exchange Act.

35,811,813 Ordinary Shares

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PROSPECTUS

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You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone to provide you with different information. We are not making any offer to sell or buy any of the securities in any state where the offer or sale is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date that appears below.

May 17, 2011

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Migdal Haemek, Israel, on May 17, 2011.

## TOWER SEMICONDUCTOR LTD.

By: /s/ Russell C. Ellwanger  
 Russell C. Ellwanger  
 Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in their respective capacities and on the respective dates indicated. Each person whose signature appears below hereby authorizes Russell Ellwanger with full power of substitution, to execute in the name and on behalf of such person any amendment or any post-effective amendment to this Registration Statement and to file the same, with exhibits thereto, and other documents in connection therewith, making such changes in this Registration Statement as the Registrant deems appropriate, and appoints Russell Ellwanger, with full power of substitution, attorney-in-fact to sign any amendment and any post-effective amendment to this Registration Statement and to file the same, with exhibits thereto, and other documents in connection therewith.

Signature	Title	Date
/s/ Amir Elstein Amir Elstein	Chairman of the Board	May 17, 2011
/s/ Russell C. Ellwanger Russell C. Ellwanger	Chief Executive Officer (Principal Executive Officer)	May 17, 2011
/s/ Oren Shirazi Oren Shirazi	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	May 17, 2011
/s/ Ilan Flato Ilan Flato	Director	May 17, 2011
/s/ Nir Gilad Nir Gilad	Director	May 17, 2011
/s/ Dana Gross Dana Gross	Director	May 17, 2011
/s/ Rami Guzman Rami Guzman	Director	May 17, 2011

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/s/ Kalman Kaufman                      Director                      May 17, 2011  
Kalman Kaufman

/s/ Alex Kornhauser                      Director                      May 17, 2011  
Alex Kornhauser

/s/ Ron Moskovitz                      Director                      May 17, 2011  
Ron Moskovitz

AUTHORIZED REPRESENTATIVE IN  
THE UNITED STATES

Tower Semiconductor USA, Inc.

May 17, 2011

By: /s/ Russell C. Ellwanger  
Russell C. Ellwanger  
Chief Executive Officer

EXHIBIT INDEX

Exhibit Numbers	Description of Document
3.1	Articles of Association of the Registrant, approved by shareholders on November 14, 2000, as amended (incorporated by reference to Exhibit 3.1 of the Registrant's Registration Statement on Form F-1, File No. 333-126909)
3.2	Amendment to the Articles of Association of the Registrant (approved by shareholders on December 7, 2003) (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-8, File No. 333-117565)
3.3	Amendment to Articles of Association of the Registrant (approved by shareholders on September 28, 2006) (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-8, File No. 333-138837)
3.4	Amendment to Articles of Association of Registrant (approved by shareholders on September 24, 2008) (incorporated by reference to Exhibit 3.4 of the Registrant's Registration Statement on Form S-8, File No. 333-153710)
4.1	2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.2	Form of Grant Letter to Israeli Employees for the 2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.3	Form of Grant Letter to U.S. Employees for the 2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.3 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.4	Form of Grant Letter to non-Israeli/non-U.S. Employees for the 2009 Employee Share Incentive Plan (incorporated by reference to Exhibit 4.4 of the Registrant's Registration Statement on Form S-8, File No. 333-166428)
4.5	2009 Chairman Share Incentive Plan (incorporated by reference to Exhibit 4.20 of the Registrant's Annual Report on Form 20-F for the fiscal year ended December 31, 2010 (filed on May 17, 2011)
5.1	Opinion of Yigal Arnon & Co.
23.1	Consent of Yigal Arnon & Co. (contained in their opinion constituting Exhibit 5.1)
23.2	Consent of Brightman Almagor Zohar & Co.

24.1 Power of Attorney (included on signature page)

