

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-A

TOWER SEMICONDUCTOR LTD.

(Exact Name of Registrant as Specified in its Charter)

Israel

Not Applicable

(State of Incorporation or Organization)

(I.R.S. Employer Identification No.)

P.O. Box 619, Migdal Haemek, Israel

23105

(Address of principal executive offices)

(Zip Code)

If this Form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), please check the following box.

If this Form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), please check the following box.

Securities Act registration statement file number to which this form relates: 333-126909

Securities to be registered pursuant to Section 12(b) of the Act:

Title of Each Class to be so Registered

Name of Each Exchange on Which Each Class is to be Registered

None

Securities to be registered pursuant to Section 12(g) of the Act:

Rights to Purchase 5% Subordinated Convertible Debentures Due 2011

(Title of Class)

5% Subordinated Convertible Debentures Due 2011

(Title of Class)

Item 1. Description of Registrant's Securities to be Registered.

Tower Semiconductor Ltd. (the "Registrant") will be distributing transferable rights ("Rights") to purchase up to \$50 million of U.S. dollar denominated debentures ("Debentures") that are convertible into up to 50,000,000 of the Registrant's ordinary shares to those persons that, as of 5:00 p.m., New York City time (midnight, Israel time) on the record date of _____, 2005 (four NASDAQ trading days after the date of the final prospectus), were either shareholders of the Registrant or eligible employees holding options to purchase the Registrant's ordinary shares under the Registrant's share option plans that entitle option holders to participate in a rights offering.

The Registrant will distribute one Right for each 138.99 ordinary shares and/or eligible employee options that the shareholder or employee owned on the record date. If a shareholder or an employee holds 138 or fewer ordinary shares and/or eligible options on the record date, such shareholder or employee will not receive any Rights. The Registrant will aggregate the Rights for all the shares and/or eligible employee options (as the case may be) that are owned on the record date and then rounded down to the nearest whole number, so that shareholders and employees will not receive fractional Rights.

The Rights are transferable and will be listed for trading for a single day on the NASDAQ Capital Market under the symbol "_____" and on the Tel Aviv Stock Exchange under the symbol "TSEM.R2". The trading day will be _____, 2005 (21 days after the record date). Shareholders who hold their Rights through an Israeli brokerage company that holds the Rights through the nominee company of the Tel Aviv Stock Exchange will be considered to have instructed their broker to sell all their Rights on the Tel Aviv Stock Exchange with no price limit, if such shareholder fails to give his or her broker instructions regarding the exercise, non-exercise or sale of the Rights prior to _____, 2005 (21 days after the record date).

Each Right will entitle the holder to purchase, at a subscription price of \$100, 100 U.S. dollar denominated Debentures. The Rights are exercisable during a 23-day period, beginning after 5:00 p.m., New York City time (midnight, Israel time) on _____, 2005 (the record date) and ending on _____, 2005 at 5:00 p.m., New York City time (midnight, Israel time).

Each Debenture is of \$1.00 in principal amount, and bears interest at the rate of 5% per annum. Principal, together with accrued interest, is payable in one installment on _____, 2011. The payment of the principal of and interest on the Debentures is subordinated to the prior payment of all amounts payable by the Registrant to Bank Hapoalim B.M. and Bank Leumi Le-Israel Ltd. under the Registrant's credit facility agreement with them, which as of October 31, 2005, had a

balance of \$518.1 million. Payment of the principal and interest on the debentures is also effectively subordinated to the Registrant's current and potential obligations to two secured creditors: (i) the Investment Center of the Israeli Ministry of Industry, Trade and Labor, to whom the Registrant may have obligations related to \$156.7 million in grants received through September 30, 2005 under the "Approved Enterprise" program, and (ii) Siliconix Technology C.V., one of the Registrant's customers, which has a first ranking charge on a bank account into which Siliconix deposited \$20 million in 2004 for the purchase of equipment and other expenses in connection with the performance of the Registrant's obligations under its agreement with Siliconix (of which as of September 30, 2005, there is a balance of approximately \$10 million) and over the equipment which has been or which may be subsequently purchased with such funds.

Commencing on the first trading day on the Tel Aviv Stock Exchange after the date on which the Debentures begin to trade on the Tel Aviv Stock Exchange and until _____, 2011, the Debentures will be convertible into the Registrant's ordinary shares at a rate of one ordinary share per \$1.00 aggregate principal amount of Debentures. The conversion rate is subject to adjustment in certain circumstances. The Debentures may be automatically converted into the Registrant's ordinary shares in certain circumstances.

Information concerning the Rights and the Debentures is included, respectively, under the caption "The Rights Offering" and "Description of the Debentures" in the Registrant's registration statement on Form F-2 filed with the Securities and Exchange Commission, as amended (Registration No. 333-126909), and is incorporated herein by reference (the "Registration Statement").

Item 2. Exhibits.

- 1.1 Articles of Association of the Issuer, as amended by vote of the shareholders on October 27, 2005 (incorporated herein by reference to Exhibit 3.1 to the Registration Statement).
 - 4.1 Form of Rights Certificate (included as Exhibit A in the form of Rights Agent Agreement filed as Exhibit No. 4.1 to the Registration Statement and incorporated herein by reference).
 - 4.2 Form of Indenture (as Exhibit No. 4.2 to the Registration Statement and incorporated herein by reference).
 - 4.3 Form of Note for the Debentures (included as Exhibit A to the form of Indenture filed as Exhibit No. 4.2 to the Registration Statement and incorporated herein by reference).
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SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this Form 8-A to be signed on its behalf by the undersigned, thereto duly authorized.

TOWER SEMICONDUCTOR LTD.

BY: /S/ Nati Somekh-gilboa

Nati Somekh-Gilboa
Corporate Secretary

Date: November 21, 2005
