
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of May 2012 (No. 1)

TOWER SEMICONDUCTOR LTD.

(Translation of registrant's name into English)

Ramat Gavriel Industrial Park

P.O. Box 619, Migdal Haemek, Israel 23105

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No

Attached hereto as Exhibit 99.1 is a consent of our independent registered public accounting firm, Brightman Almagor Zohar & Co., to the incorporation into our effective Registration Statements listed in such consent, of their reports dated February 15, 2012 appearing in our Annual Report on Form 20-F for the year ended December 31, 2011.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TOWER SEMICONDUCTOR LTD.

Date: May 2, 2012

By: /s/ Nati Somekh

Nati Somekh
Corporate Secretary

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statements Nos. 333-85090, 333-108896, 333-110486 333-131315, 333-140174, 333-141640, 333-148747, 333-163196, 333-169389, 333-169491, 333-171912 and 333-178166 on Form F-3, and Nos. 33-80947, 333-06482, 333-11720, 333-83204, 333-107943, 333-117565, 333-138837, 333-147071, 333-153710, 333-166428, 333-174276 and 333-178167 on Form S-8, of our reports dated February 15, 2012, relating to the consolidated financial statements of Tower Semiconductor Ltd. (the "Company") and the effectiveness of the Company's internal control over financial reporting, appearing in the Company's Annual Report on Form 20-F for the year ended December 31, 2011.

/s/ Brightman Almagor Zohar &Co

Brightman Almagor Zohar &Co.
Certified Public Accountants
A member of Deloitte Touche Tohmatsu

Tel Aviv, Israel
April 30, 2012
