Prospectus Supplement No. 7 (to Prospectus Supplement No. 6 dated September 14, 2009 and Prospectus dated February 15, 2008) Filed pursuant to Rule 424(b)(2) Registration Statement No. 333-148747

TOWER SEMICONDUCTOR LTD.

On September 14, 2009 we filed Prospectus Supplement No. 6 with respect to the sale to certain institutional investors located in Israel of 5,361,932 of our ordinary shares at a price of NIS 3.73 (equivalent to approximately \$0.99) per ordinary share. Said investors also received Series 6 warrants to purchase up to 1,340,483 of our ordinary shares at an exercise price of \$1.06 per share, exercisable until August 7, 2011.

As described in Prospectus Supplement No. 6, the number of ordinary shares issuable to the investors is subject to increase if the closing price of our ordinary shares on the Tel-Aviv Stock Exchange on the date the ordinary shares were delivered to the investors is less than NIS 3.77. In such event, we are required to issue additional ordinary shares to the investors in an aggregate amount equal to the difference between (A) the product of dividing (i) 20 million by (ii) 99% of the closing price of the Shares and (B) 5,361,932 (the number of Shares originally issuable to the purchasers).

The ordinary shares were delivered to the purchasers on September 15, 2008 and the closing price of our ordinary shares on the Tel-Aviv Stock Exchange on that date was NIS 3.25. An aggregate of 854,074 additional ordinary shares will be issued to the investors pursuant to the adjustment described in the preceding paragraph.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying base prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is September 18, 2009.