

**FORM 6-K**

**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

For the month of June 2009 No. 3

**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

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On June 30, 2009, the registrant announces Production of World's Fastest Single Port Re-Configurable Linear Image Sensors for Panavision Imaging.

This Form 6-K is being incorporated by reference into all effective registration statements filed by us under the Securities Act of 1933.

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**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: June 30, 2009

By: /s/ Nati Somekh Gilboa

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Nati Somekh Gilboa  
Corporate Secretary



**Panavision Imaging and Tower Semiconductor Announce Production of World's Fastest Single Port Re-Configurable Linear Image Sensors**

**HOMER, New York and MIGDAL HA'EMEK, Israel, June 30, 2009** – Panavision Imaging LLC, a pioneering innovator and developer of high performance CMOS image sensors, and Tower Semiconductor, Ltd. (Nasdaq: TSEM, TASE: TSEM), a leading global specialty foundry, today announced production of Panavision's family of DLIS-2K re-configurable line scan CMOS image sensors. The DLIS-2K sensors were developed using Tower's Advanced Photo Diode (APD) pixel process and pixel IP with Panavision's patented Imager Architecture. These re-configurable linear image sensors offer high performance at a low cost and combine high sensitivity, high speed, and versatility to address many applications in consumer, industrial, automotive, and scientific markets.

According to a report from Global Industry Analysts Inc., the value of the world image sensors market is expected to rise to \$11.7 billion by 2012. Overall, image sensors have expanding applications in consumer electronics such as camcorders, security and computer cameras, and portable communications devices, and in the industrial and business sector, in areas such as biometrics, machine vision, broadcasting, film cameras and medicine. In the automotive industry, there is increased demand for angular rate, occupancy seat and cruise control sensors, lane deviation systems and rear-view cameras.

The DLIS-2K Imager is a Quad Line Sensor with 11 bit A/D, High Dynamic Range, and Correlated Multi-Sampling (CMS) for Enhanced Sensitivity. The sensors are used in Spectroscopy, barcode, touch screen, OCR, machine vision, measurement, and other applications. The patented technological advances in these

products allow for flexibility in image collection and readout, including: ambient light subtraction, oversampling, non-destructive read mode, binning of different integrations, auto-thresholding and a high resolution mode with an unprecedented 120MHz pixel readout.

The DLIS sensors have ambient light subtraction in combination with up to 12 bit digitization and auto-thresholding. This provides a simple binary output on chip, allowing removal of many of the system components for barcode, touchscreen or any application that needs to locate a position or a centroid. The user can also input an analog signal that the application may need to have digitized. The operation modes can be mixed or matched and with four rows of pixels the possible combinations allow for an optimal solution for many different applications.

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“Our goal is to address the expanding bar code and touch screen markets with a programmable image sensor at a highly competitive price point. Tower’s CMOS Image Sensor technology and manufacturing capabilities are world-class and the close interaction between our design team and Tower’s engineers helped us to achieve quick ramp to production,” said Jeffrey Zarnowski, CTO for Panavision Imaging LLC.

“We are pleased that Panavision’s family of linear image sensors is in production as these products will greatly advance the capabilities of a myriad of devices in various markets. By combining our Advanced Photo Diode (APD) pixel process and pixel IP with Panavision’s patented Imager Architecture, we have enabled imaging characteristics previously not attainable in linear imagers,” said Dr. Avi Strum, Vice President and General Manager of Tower’s Specialty Business Unit at Tower Semiconductor.

Utilizing Tower’s 0.18-micron technology allows for on-chip, bit-selectable, Analog to Digital converter as well as higher data transfer rates versus prior products. Tower’s APD process and pixel IP exhibit improved charge transfer characteristics for a higher sensitivity over standard photodiodes. The combination of Tower’s technology and Panavision Imaging architecture enables a 4 X 32 micron pixel with sensitivity exceeding 100 V/Lux·Sec.

#### **About Panavision Imaging:**

Based in Homer, New York, Panavision Imaging, LLC is a pioneering innovator and developer of high performance CMOS image sensors and related technology. The company’s products are based on several patented and patent pending technologies including Active Column Sensor™ (ACS®), XtremePIX®, D/AD™ and others. Offering sensors in 2D array, line scan and custom, their products are found in many low to high-end imaging applications, serving the consumer, commercial, scientific and industrial markets. For more information and a data sheet, please visit [www.panavisionimaging.com](http://www.panavisionimaging.com).

#### **About Tower Semiconductor, Ltd.**

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), a global specialty foundry leader, manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron and provides complementary technical services and design support. Tower, along with its fully owned U.S. subsidiary, Jazz Semiconductor, Inc., offers a broad range of process technologies including Digital, Mixed-Signal and RFCMOS, HV CMOS, Power Management, Non-Volatile Memory (NVM), Embedded NVM, MEMS, and CMOS Image Sensors. Tower provides world-class customer service and maintains two fabrication facilities in Israel and a fab in Newport Beach, CA, with manufacturing capacity available in China through partnerships with ASMC and HHNEC. For more information, please visit [www.towersemi.com](http://www.towersemi.com) and [www.jazzsemi.com](http://www.jazzsemi.com).

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#### **Safe Harbor Regarding Forward-Looking Statements**

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect Tower’s and Jazz’s business is included under the heading “Risk Factors” in Tower’s most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the “SEC”) and the Israel Securities Authority and Jazz’s most recent filings on Forms 10-K and 10-Q, as were filed with the SEC. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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