TOWER SEMICONDUCTOR LTD
Form 6-K
April 15, 2008

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of April 2008 No. 2

TOWER SEMICONDUCTOR LTD.
(Translation of registrant's name into English)

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 [X] 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 [X]

On April 15, 2008, the registrant announces Tower Semiconductor Ramps Production of Canesta's Breakthrough 3D Image Sensors. Attached hereto is a copy of the press release.

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

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: April 15, 2008

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

Tower Semiconductor Ramps Production of

Canesta's Breakthrough 3D Image Sensors

TARGETING A RAPIDLY GROWING MARKET OF BILLIONS OF DOLLARS IN AUTOMOTIVE, GAMING AND INDUSTRIAL APPLICATIONS

MIGDAL HA'EMEK, Israel and SUNNYVALE, California (April 15, 2008) - Tower Semiconductor, Ltd. (Nasdaq: TSEM, TASE: TSEM), an independent wafer foundry, and Canesta, Inc., the inventor and pioneer of Electronic Perception Technology, announced today that Canesta's revolutionary 3D image sensors are ramping to broad production at Tower. The availability of the breakthrough chips from a standard semiconductor manufacturing process will make it possible, for the first time, for mass market "everyday devices" to be able to "see".

CanestaVision(TM) sensors, now in final qualification stages for the automotive industry, are being manufactured at Tower's advanced Fab2 facility, using its state-of-the-art, CMOS Image Sensor (CIS) 0.18-micron technology process.

"In addition to developing sophisticated technologies that enable our CanestaVision(TM) chips to follow objects in three dimensions and real time in any light, we have invested significant resources to create this capability on a chip that can be produced using a conventional CMOS platform," said Jim Spare, Canesta president and CEO. "The resulting high availability and low cost make the sensors attractive to mass market opportunities for electronic perception technology. Tower Semiconductor is a well recognized leader in CMOS image sensor technology and is an excellent partner in reaching this goal."

"We are very pleased to see the fruits of our mutual investment in the past few years coming to reality", said Dr. Avi Strum, General Manager of CMOS Image Sensor Product Line at Tower Semiconductor. "Canesta's approach to 3D imaging is a breakthrough. Together, our market opportunity is very large."

According to a recent study by Strategy Analytics, these kind of applications, such as 3D camera will boost the growth of the automotive semiconductor market from $18 billion in 2006 to $29 billion by 2013 through an 8.2 percent yearly growth rate. Similarly, new user-interaction mechanisms in which a user's actions or gestures drive the functions of a device have been proven by the success of recent videogame and mobile phone products. The market for next-generation 3D image sensors designed to enable a device to understand and interact with its environment more accurately and robustly will be a significant part of the traditional image sensor market (which is reported by isuppli.com to be $5.5 Billion in 2007).

While traditional 2D image sensors collect and record color images for human perception, 3D sensors add the extra dimension necessary to enable electronic devices to "see." 3D sensors are expected to be widely deployed in a variety of markets including:

- Consumer entertainment systems, such as video games that provide more immersive experiences
- Machine vision and smart, automatic door sensors with improved interpretation of their surroundings;
- Advanced automotive systems that perceive obstacles with greater fidelity and flexibility than other approaches;

and many others.

ABOUT TOWER SEMICONDUCTOR LTD.

Tower Semiconductor Ltd. (Nasdaq: TSEM, TASE: TSEM) is an independent specialty foundry that delivers customized solutions in a variety of advanced CMOS technologies, including digital CMOS, mixed-signal and RF (radio frequency) CMOS, CMOS image sensors, power management devices, and embedded non-volatile memory solutions. Tower's customer orientation is complemented by its uncompromising attention to quality and service. Its specialized processes and engineering expertise provides highly flexible, customized manufacturing solutions to fulfill the increasing variety of customer needs worldwide. Boasting two world-class manufacturing facilities with standard and specialized process technologies ranging from 1.0- to 0.13-micron, Tower Semiconductor provides exceptional design support and technical services to help customers sustain long-term, reliable product performance, while delivering on-time and on-budget results.

More information can be found at http://www.towersemi.com.

ABOUT CANESTA INC.

Canesta is the inventor of revolutionary, low-cost electronic perception technology that enables ordinary electronic devices in consumer, security, industrial, medical, automotive, factory automation, gaming, military, and many other applications, to perceive and react to objects or individuals in real time. When given true, fine-grained 3-dimensional depth perception with Canesta's unique CanestaVision(TM) electronic perception chips and software, such products can gain functionality and ease of use not possible in an era when such devices were blind.

Numerous applications are under active development by Canesta's OEM customers and partners, including building automation, security, robotics, automotive, computer gaming, and others.

Canesta was founded in April 1999, and is located in San Jose, CA. The company has filed in excess of forty patents, 26 of which have been granted so far. Investment to date exceeds $58 million, from Carlyle Venture Partners, Honda Motor Company, Hotung Capital Management, JP Morgan Partners, Korea Global IT Fund (KGIF), Venrock Associates and others.

More information can be found at http://www.canesta.com.

SAFE HARBOR:

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 our business is included under the heading "Risk Factors" in our most recent Annual Report on Forms 20-F, F-1, F-3 and 6-K, as were filed with the Securities and Exchange Commission and the Israel Securities Authority. We do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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