FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of June 2013 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 S 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 S

On June 11, 2013, the registrant announces TowerJazz and CMOSIS Announce Ramp to Volume Production for CMOSIS' 12-megapixel CMV12000.

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.

By:

TOWER SEMICONDUCTOR LTD.

Date: June 11, 2013

/s/ Nati Somekh Name: Nati Somekh Title: Corporate Secretary

TowerJazz and CMOSIS Announce Ramp to Volume Production for CMOSIS' 12-megapixel CMV12000

ANTWERP, Belgium and MIGDAL HAEMEK, Israel, June 11, 2013 – CMOSIS, a leading independent developer and supplier of high end CMOS image sensors for professional imaging applications, and TowerJazz, the global specialty foundry leader, today announced the ramp to volume production for CMOSIS' 12-megapixel CMV12000, following the very successful volume production of its CMV products. In 2010, CMOSIS and TowerJazz announced collaboration on the CMV product line, the flagship product family of CMOSIS. Since its introduction, the CMV product family has been very successful in gaining market share.

CMOSIS' off-the-shelf CMV12000 is manufactured in TowerJazz's Fab-2 in Migdal Haemek, Israel using its advanced 0.18µm specialty CIS process (TS18IS). The sensor's excellent performance is based on CMOSIS' collaboration and co-development with TowerJazz's R&D experts. The CMV 12000 product features 5.5 x 5.5 µm pixels laid out in a high-resolution 4096 x 3072 matrix covering superHD (4k) resolution in an APS-C optical format. It offers high sensitivity and low noise, global shutter and a frame rate of 150 fps providing best in-class performance serving various markets such as industrial inspection, broadcasting, motion analysis and others.

According to a 2012 Yole Développement CMOS image sensors report: 530,000 machine vision cameras were sold in 2011 and sales of machine vision cameras are expected to grow to 644,000 units in 2015 at a 5% CAGR. The report also noted that while today CCD still represents the large majority of the machine vision market, CMOS cameras are expected to represent half of the sales in 2015 and to take over about 80% of the machine vision market in 2020. Today, CMOS-based cameras represent only 20% of the global market in units, but 80% of the R&D of camera manufacturers' investments.

CMOSIS continues to apply TowerJazz's advanced CMOS image sensor technology to meet the market's growing demands and to expand its relationship with TowerJazz to collaborate on its next generation of CMOS image sensors. CMOSIS addresses the need for image sensors used in consumer, industrial, medical and automotive applications such as those used in movie and TV, traffic monitoring and motion control, among others. CMOSIS' in-house developed CIS technology, along with TowerJazz's proven experience in the imaging field and its own CIS technology developed in-house, enables optimized designs with superior performance. TowerJazz's process features low dark current, low noise and high dynamic range and its skilled experts support the customization of pixels per customer requirements and project needs.

"We have enjoyed a very fruitful relationship with TowerJazz for several years. TowerJazz has an expert team that can customize the CIS process to our needs and create, together with us, new pixels that outperform our competitors. Our ability to offer innovative imaging products with highly reliable performance is based on our collaboration with TowerJazz and their mature process technology, extensive R&D investment and excellent customer support. By combining our companies' expertise, we are able to offer a rich solution for various digital imaging applications," said Lou Hermans, Chief Operating Officer, CMOSIS.

"We are thrilled to work with partners such as CMOSIS, true innovators in the imaging field. The success of their CMV products is based on our successful and wide-ranging relationship with CMOSIS from concept to development, together solving complex engineering challenges and delivering products to their customers with best in class, quality results. Together, we are dedicated to bringing to market superior technology and we aim to gain a significant share of the consumer, industrial and professional CMOS image sensor markets," said Dr. Avi Strum, VP and GM, CMOS Sensors Business Unit and VP of Sales, Europe, TowerJazz.

About CMOSIS

CMOSIS is a pure-play supplier of standard off-the-shelf and application-specific CMOS image sensors for the industrial and professional market covering applications such as machine vision, scientific, medical, automatic data

capture and space. Founded in 2007 as a fabless CMOS image sensor vendor CMOSIS provides standard off-the-shelf and turn-key solutions to customers based on in-house design, characterization and qualification facilities for research, development and volume production. CMOSIS currently employs more than 50 people and is headquartered in Antwerp, Belgium.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits, offering a broad range of customizable process technologies including: SiGe, BiCMOS, Mixed-Signal/CMOS, RFCMOS, CMOS Image Sensor, Power Management (BCD), and MEMS capabilities. TowerJazz also provides a world-class design enablement platform that enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Transfer Optimization and development Process Services to IDMs and fabless companies that need to expand capacity. TowerJazz offers multi-fab sourcing with two manufacturing facilities in Israel, one in the U.S., and one in Japan. For more information, please visit www.towerjazz.com.

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 TowerJazz'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, respectively. 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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