
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month December 2019 No. 4

TOWER SEMICONDUCTOR LTD.

(Translation of registrant's name into English)

Ramat Gavriel Industrial Park

P.O. Box 619, Migdal Haemek, Israel 2310502

(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

**On Dec 19, 2019, the Registrant and Aledia Announced Their Process Development
Partnership Agreement for Cutting-Edge Nanowire-LED Technology**

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: Dec 19, 2019

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

TowerJazz and Aledia Enter into Process Development Partnership Agreement for Cutting-Edge Nanowire-LED Technology

Utilizing TowerJazz process development services (TOPS) to bring Aledia's innovative IP into commercialized volume production

Providing breakthrough solutions for next generation display panels

MIGDAL HAEMEK, Israel, and GRENOBLE, France, December 19, 2019 – TowerJazz, the global specialty foundry leader, and Aledia, a developer and manufacturer of next-generation 3D LEDs for display applications based on its gallium-nitride-nanowires-on-silicon platform, today announced their process development partnership to bring Aledia's novel nanowire-LED technology into commercialized volume production. This development is based on Aledia's IP and utilizes TowerJazz's unique and highly experienced Transfer Optimization and Development Process Services (TOPS). Financed by Intel Capital among others, Aledia's nanowire-LED display technology offers breakthrough solutions for the global display market's constant growing demand.

"We are very excited to take our technology into its industrialization phase. We chose TowerJazz due to its vast expertise in the field of process development, its high quality and extensive production capabilities, well serving our long-term production roadmap", said Giorgio Anania, Aledia's CEO. "We are looking forward to proceed toward successful collaboration".

Aledia's 3D LED novel technology enables high brightness (x1000 of today's average screen), high resolution, low power, and cost effective displays, all of which are key parameters in a variety of today's and future mobile display applications including laptops, tablets, mobile phones, augmented / virtual reality (AR/VR), and smart watches among others. With an ever-growing rate of consumers using their mobile screens in their daily lives, this market carries an enormous potential growth rate.

TowerJazz's advanced TOPS services enables and facilitates quick transfer and manufacturability of Aledia's technology. The Company's global manufacturing capabilities, offering both 200mm and 300mm options, provide various advantages for volume production in scalable wafer sizes which enhance its cost competitiveness, capacity assurance, as well as future roadmap alignment.

"We are very proud to have partnered with Aledia's team of experts to bring their innovative technology into production phase. This technology provides significant differentiators addressing all the main feature requirements of the uLED displays market and holds profound potential growth for both companies", said Dani Ashkenazi, Vice President and General Manager of Transfer, Optimization and Development Process Services Business Unit (TOPS). "Bringing Aledia's solutions into volume production is a major step in establishing its role as a leading provider of next-generation display panel technology and we have great confidence in their success".

For more information about Aledia's technology, please visit [here](#).

For more information about TowerJazz TOPS offering, please visit [here](#).

For more information about TowerJazz technology offering, please visit [here](#).

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) and its subsidiaries operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures next-generation integrated circuits (ICs) in growing markets such as consumer, industrial, automotive, medical and aerospace and defense. TowerJazz's advanced technology is comprised of a broad range of customizable process platforms such as: SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, integrated power management (BCD and 700V), and MEMS. TowerJazz also provides world-class design enablement for a quick and accurate design cycle as well as Transfer Optimization and development Process Services (TOPS) to IDMs and fabless companies that need to expand capacity. To provide multi-fab sourcing and extended capacity for its customers, TowerJazz operates two manufacturing facilities in Israel (150mm and 200mm), two in the U.S. (200mm) and three facilities in Japan (two 200mm and one 300mm). 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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