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**FORM 6-K**

**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

For the month December 2019 No. 2

**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

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**On Dec 04, 2019, the Registrant Announced Qualification by Inphi for Production of Advanced Silicon Photonics Integrated Circuits (PICS) for Data Center Connectivity**

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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: Dec 04, 2019

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

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## **Inphi Qualified TowerJazz for Production of Advanced Silicon Photonics Integrated Circuits (PICS) for Data Center Connectivity**

*The PICS are manufactured on TowerJazz's open foundry Silicon Photonics and SiGe platforms serving the high demand in Data Center and 5G Infrastructure markets*

**MIGDAL HAEMEK, Israel, and SANTA CLARA, CA, December 4, 2019** – [TowerJazz](#), the global specialty foundry leader, today announced that it has been qualified by [Inphi Corporation](#) for production of Silicon Photonics Integrated Circuits for data center interconnects based on TowerJazz's open foundry [Silicon Photonics](#) platform. Inphi's vast high-speed optics platform expertise and market presence, combined with TowerJazz's foundry capabilities in advanced RF Silicon and Photonics platforms, form the basis for additional co-development and technology roadmap alignment.

Inphi's innovative Silicon Photonics PAM4 technology is the industry's first low power, cost effective 100G DWDM platform solution in QSFP28 form factor for between data center interconnects. Inphi continues to be the leading supplier of advanced platform solutions for data center operators to address their needs for ever growing data movement needs.

TowerJazz's PH18 Silicon Photonics platform offers a rich set of optical components including ultra-high bandwidth modulators, and photodetectors, serving the demand in data center and infrastructure optical communication markets. This platform complements TowerJazz's SiGe BiCMOS processes, providing enhanced solutions to its already strong customer base serving optical communication needs in the growing data transport markets.

"We worked with TowerJazz due to their unique ability to develop new cutting edge technology and offer it in a high-volume, high-quality environment. With Inphi's proven design expertise and first to market success in the areas of high electrical and optical speed data interconnects, we are looking forward to the continued partnership with TowerJazz in developing the next generation of Silicon Photonics Integrated Circuit components," said Dr. Radha Nagarajan, CTO, Interconnect, Inphi.

"TowerJazz is proud to have partnered with a market and product leader such as Inphi in the area of Silicon Photonics. Further, we are excited about this open foundry Silicon Photonic platform complementing our SiGe technology and bringing additional value to our customers as they develop new, breakthrough products for Data Center and 5G Infrastructure markets," said Dr. Marco Racanelli, TowerJazz Sr. Vice President and General Manager of Analog IC Business Unit.

For more information about TowerJazz's RF & HPA process technology offerings, please [click here](#).

For more information about TowerJazz's process technology offerings, please [click here](#) or inquire at: [info@towerjazz.com](mailto:info@towerjazz.com).

### **About Inphi**

Inphi Corporation is a leader in high-speed data movement interconnects. We move big data – fast, throughout the globe, between data centers, and inside data centers. Inphi's expertise in signal integrity results in reliable data delivery, at high speeds, over a variety of distances. As data volumes ramp exponentially due to video streaming, social media, cloud-based services, and wireless infrastructure, the need for speed has never been greater. That's where we come in. Customers rely on Inphi's solutions to develop and build out the Service Provider and Cloud infrastructures, and data centers of tomorrow. To learn more about Inphi, visit [www.inphi.com](http://www.inphi.com).

### **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](http://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.

*I Inphi, the Inphi logo and Think fast are registered trademarks of Inphi Corporation. All other trademarks used herein are the property of their respective owners.*

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