
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 6-K

**REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16
OF THE SECURITIES EXCHANGE ACT OF 1934**

For the month of August 2026 No.2

Commission File Number 0-24790

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 of Form 20-F or Form 40-F.

Form 20-F ☒ Form 40-F ☐

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: August 11, 2026

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

OpenLight and Tower Semiconductor Expand PH18DA Photonics Ecosystem to Accelerate Photonic IC Development

OpenLight's PDK is now available on Cadence's EDA tools, enabling PIC development on Tower's PH18DA InP-on-silicon photonics platform

SANTA BARBARA, Calif., and MIGDAL HAEMEKE, Israel, - August 11, 2026 - [OpenLight](#), a leader in heterogeneous III-V-on-silicon photonic integration and custom Photonic Application-Specific Integrated Circuits (PASICs), and [Tower Semiconductor](#) (NASDAQ/TASE: TSEM), the leading foundry for high-value analog semiconductor solutions, today announced the availability of OpenLight's photonic Process Design Kit (PDK) for Tower Semiconductor's PH18DA indium phosphide (InP)-on-silicon photonics platform in Cadence's electronic design automation (EDA) tools. Developed through close technical collaboration between the companies, the PDK now enables customers to design advanced photonic integrated circuits (PICs) within a widely adopted IC design environment and accelerate development toward production.

The PH18DA ecosystem brings together OpenLight's photonics IP, Tower's process and manufacturing expertise, and Cadence's leading EDA tools, enabling a streamlined path for developing advanced photonic ICs while bringing photonics design closer to established electronic IC workflows and manufacturing.

"By making our PDK available on Cadence tools, we enable customers to design photonic integrated circuits within the same environment they rely on for advanced IC development," **said Dr. Adam Carter, CEO at OpenLight**. "This integration simplifies adoption and strengthens the path from design to production on the PH18DA platform."

Designs created using OpenLight's PDK support fabrication on Tower's PH18DA InP-on-silicon photonics platform, which enables the integration of active photonic components - including lasers, modulators, and amplifiers - into a single monolithic PIC. The platform supports advanced optical systems for applications such as optical interconnects, AI infrastructure, and sensing.

"In collaboration with Cadence and OpenLight, we are advancing design capabilities on the PH18DA platform through a new capability that integrates expertise across technology, IP, and EDA," **said Dr. Samir Chaudhry, Vice President of Customer Design Enablement and Reliability at Tower Semiconductor**. "This approach enables customers to streamline development of 400G and 1.6T laser-integrated photonic integrated circuits, while achieving co-optimized PIC and EIC designs for improved performance, power efficiency, and scalability necessary for next-generation near- and co-packaged optics (NPO/CPO) solutions."

"Adding the OpenLight PDK PH18DA manufactured by Tower Semiconductor to the rich portfolio of photonics processes supported by the Cadence Photonics ecosystem is a key milestone because it marks the introduction of integrated active devices for high-performance, co-optimized electro-optical designs," **said Gilles Lamant, Distinguished Engineer, Cadence**.

For additional information about Tower Semiconductor's SiPho technology platform, [visit here](#).

For additional information about OpenLight, [visit here](#).

About OpenLight

OpenLight is a leader in the heterogeneous integration of III-V devices in silicon photonics. OpenLight's world-leading PASIC technology, supported by its process design kit (PDK), integrates all active and passive components of silicon photonics devices into a single chip, enabling high-performance, energy-efficient photonics solutions across datacom, telecom, automotive, AI, and quantum computing applications and markets. The company's recent \$50 million Series A-1 funding round, bringing total funding to \$84 million, reflects growing commercial momentum and accelerating customer adoption across next-generation photonics applications. The company is headquartered in Santa Barbara, California, with offices in Silicon Valley. Read more at www.openlightphotonics.com.

About Tower Semiconductor

Tower Semiconductor Ltd. (NASDAQ/TASE: TSEM), the leading foundry of high-value analog semiconductor solutions, provides technology, development, and process platforms for its customers in growing markets such as consumer, industrial, automotive, mobile, infrastructure, medical and aerospace and defense. Tower Semiconductor focuses on creating a positive and sustainable impact on the world through long-term partnerships and its advanced and innovative analog technology offering, comprised of a broad range of customizable process platforms such as SiPho, SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, non-imaging sensors, displays, integrated power management (BCD and 700V), and MEMS. Tower Semiconductor also provides world-class design enablement for a quick and accurate design cycle as well as process transfer services including development, transfer, and optimization, to IDMs and fabless companies. To provide multi-fab sourcing and extended capacity for its customers, Tower Semiconductor currently owns one operating facility in Israel (200mm), two in the U.S. (200mm), and two in Japan (200mm and 300mm) which it owns through its 51% holdings in TPSCo and shares a 300mm facility in Agrate, Italy with STMicroelectronics. For more information, please visit: www.towersemi.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 Tower'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. Tower does not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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