
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 February 2026 No.4

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: February 19, 2026

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

Xanadu and Tower Semiconductor Deepen Strategic Collaboration to Accelerate Photonic Quantum Hardware Innovation

Strengthening the manufacturing foundation for commercial-scale photonic quantum computing

MIGDAL HAEMEK, Israel, and Toronto, ON, February 19, 2026 - [Tower Semiconductor](#), the leading foundry of high-value analog semiconductor solutions, and Xanadu, a leading photonic quantum computing company, today announced an expansion of their collaboration in developing advanced silicon photonics for fault tolerant quantum computers based on Tower's high-volume silicon photonics platform. These developments build on prior collaborative technical achievements, including a series of successful joint tapeouts to test and refine Xanadu's designs on Tower Semiconductor process flows.

Xanadu and Tower have co-engineered a unique production flow for Xanadu's custom material stack, delivering a manufacturing-aligned, architecture-compatible platform for next-generation photonic quantum hardware. This custom stack is designed to sustain both scalability and performance as systems grow in complexity, meeting the requirements of large-scale quantum information processing.

"Our work with Tower has been instrumental in moving our hardware from concept to prototype to demonstrator systems within a scalable manufacturing environment," said **Christian Weedbrook, Founder and CEO of Xanadu**. "By combining our architectural breakthroughs, fabrication process engineering and design innovations with Tower's world-class technology and manufacturing expertise, we are building the foundation for a truly useful quantum computer."

"Xanadu is advancing one of the most scalable quantum architectures in the industry, and we're pleased to deepen our collaboration to support manufacturable scale," said **Dr. Ed Preisler, Vice President and General Manager of RF Business Unit, Tower Semiconductor**. "This reinforces the broad applicability of our platform across multiple advanced domains including quantum computing, data centers, telecom and automotive applications.

Current developments focus on optimizing the performance of critical components using standard product flows for ultra-low loss silicon nitride (SiN) and integrated photodiodes. These projects allow Xanadu to validate its cutting-edge photonic circuit designs on an established high-volume manufacturing platform. In addition, as the quantum computing industry advances toward commercial scale systems, this collaboration is set to meet the manufacturability requirements of large-scale photonic quantum computing.

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

For more information about Xanadu, please visit [xanadu.ai](#).

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.

About Xanadu: Xanadu is a Canadian quantum computing company with the mission to build quantum computers that are useful and available to people everywhere. Founded in 2016, Xanadu has become one of the world's leading quantum hardware and software companies. The company also leads the development of PennyLane, an open-source software library for quantum computing and application development. Visit [xanadu.ai](#) or follow us on X [@XanaduAI](#).

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Tower Semiconductor Company Contact: Orit Shaha | +972-74-7377440 | oritsha@towersemi.com

Tower Semiconductor Investor Relations Contact: Liat Avraham | +972-4-6506154 | liatavra@towersemi.com

Xanadu media contact: press@xanadu.ai