
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.5

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

On February 25, 2026, the Registrant and Salience Labs Partner to Manufacture At-Scale Optical Circuit Switches for Next-Generation Data Centers

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 25, 2026

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

Salience Labs and Tower Semiconductor Partner to Manufacture At-Scale Optical Circuit Switches for Next-Generation Data Centers

Salience Lab's Innovative Architecture leverages Tower's differentiated Silicon Photonics platforms to deliver ultra-low latency, high-bandwidth and lower-power optical connectivity for AI clusters

MIGDAL HAEMEK, Israel, and OXFORD, England, February 25, 2026 — Tower Semiconductor, the leading foundry of high-value analog semiconductor solutions, and Salience Labs Limited, a leader in photonic solutions targeting connectivity for AI datacenter infrastructure, today announced a partnership to manufacture Photonic Integrated Circuit (PIC) based Optical Circuit Switches (OCS) for AI infrastructure. The collaboration leverages Tower's high-volume silicon photonics platforms, namely, PH18DA with integrated III-V lasers and TPS45PH, with low loss nitride waveguides. The partnership moves from development into pre-production phase, driving product readiness and at-scale deployment for AI data-center deployment.

AI workloads are driving unprecedented growth in data-center scale and network complexity, increasing the need for higher bandwidth, lower network latency and lower energy per bit across optical interconnects. OCS architecture provides an ideal alternative to the current OEO conversion-based Electronic Packet Switching (EPS) architecture by moving more connectivity and switching into the optical domain and minimizing electrical bottlenecks. According to Dell'Oro Group, data center switch spending in AI back-end networks will exceed \$100 billion by 2030 due to a rise in deployments across scale-up, scale-out and scale across domains.

"Tower is a key partner for Salience Labs, supporting our roadmap with its silicon photonics and switching technology platforms," said **Vaysh Kewada, Founder, CEO and Director, Salience Labs**. "Our collaboration builds on our deep expertise in silicon photonics and specialty platforms, strengthening our ability to deliver optical switch technology optimized for the performance and power demands of AI data centers."

"Silicon photonics with integrated light sources is a key enabler for scaling next-generation optical connectivity, and our collaboration with Salience Labs reinforces our strong momentum in AI and data-center infrastructure," said **Dr. Ed Preisler, Vice President and General Manager of RF Business Unit, Tower Semiconductor**. "Salience Labs brings a compelling OCS approach for AI infrastructure, and we're excited to support its scaling. Leveraging the ability to combine our silicon photonics and specialty process platforms, enables customers to industrialize silicon photonics-based switching architectures, while securing a path from development phase to volume manufacturing."

Both companies will be attending the upcoming **OFC 2026 Conference** in Los Angeles, **March 17–19**, with representatives available for meetings during the event. For more information about Salience Labs, visit **booth #5232** and its website: [here](#).

To learn more about Tower Semiconductor's advanced silicon photonics (SiPho) platform and RF & HPA technology offerings, visit **booth #2221**. Additional information is also available on the Company's website: [here](#).

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 SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, non-imaging sensors, displays, integrated power management (BCD and 700V), photonics, 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 owns one operating facility in Israel (200mm), two in the U.S. (200mm), 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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About Salience Labs

Salience Labs Limited is a leader in photonic solutions targeting connectivity for AI datacenter infrastructure. Founded in 2021 and backed by over a decade of research from the University of Oxford in the UK and University of Münster in Germany, Salience's innovative developments in photonic switching technology enable high-speed, ultra-low latency networking fabrics that remove infrastructure bottlenecks for AI workloads. Learn more at www.saliencelabs.ai

Salience Labs Media Contact

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