



Scintil achieves integration of III-V DFB lasers and amplifiers with standard silicon photonics technology in production at Tower Semiconductor

This significant milestone is pivotal in reinforcing Scintil's supply chain and meeting growing demand for high-performance communication solutions in data centers, artificial intelligence (AI) and 5G networks

Grenoble, France, February 27, 2024 - Scintil Photonics, a leading supplier of innovative silicon Photonic Integrated Circuits (PICs), today announces the integration of III-V-DFB lasers and amplifiers with standard silicon photonics technology in production at Tower Semiconductor, marking a pivotal step forward in the reinforcement of Scintil's supply chain.

Scintil's fully integrated circuits are made from a unique proprietary technology, relying on standard Si photonics and enabling the monolithic integration of lasers and amplifiers to bring improved performance, speed, reliability and high-density at low power consumption for datacenter, AI and 5G applications.

Fabricated on Tower's high-volume base PH18M silicon photonics foundry technology, which includes low-loss waveguides, photodetectors and modulators, Scintil's technology monolithically integrates DFB lasers and amplifiers on the backside of wafers. Further testing of Scintil's circuits by customers showed no need for a hermetic package, while demonstrating improved ageing and robustness.

"We are delighted to highlight our collaboration with Tower Semiconductor, a leading global foundry," said Sylvie Menezo, president & CEO of Scintil Photonics. "In our commitment to advancing communication technology and products, our work together marks a significant milestone. Thanks to our long-time collaboration, we are well-positioned to deliver Laser-augmented Silicon Photonic ICs that redefine integration, performance and scalability. This will position Scintil for high-volume production to meet market demands. In addition, our technology exhibits remarkable opportunities to accommodate the integration of more materials, such as quantum dot and lithium niobate materials."

According to the market research firm LightCounting, the silicon photonics transceiver market is expected to rise at a [compound annual growth rate \(CAGR\) of 24%](#), reaching a total addressable market (TAM) of at least \$7bn in 2025.

"We are excited to support Scintil in this highly integrated solution that makes use of proven production building blocks from Tower," said Edward Preisler, vice president and general manager of the RF Business Unit of Tower Semiconductor. "The integration of III-V optical amplifiers/lasers aligns with Tower Semiconductor's commitment to bringing to market cutting-edge silicon photonic technologies."

About Scintil Photonics

SCINTIL

PHOTONICS

Scintil Photonics develops and markets Augmented Silicon Photonic Circuits:

- Single chip DWDM light source, combining 8 to 16 lasers with frequencies spaced by 100 or 200 GHz
- Single chip CWDM 800 Gbit/sec and 1600 Gbit/sec transmitters with integrated DFB lasers, amplifiers and receivers

The company has developed innovative electronics for the low-speed control of its photonic circuits and makes use of off-the-shelf cutting-edge high-speed Drivers/TIAs.

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