

## **Singapore's CompoundTek announces advanced R&D collaboration in laser source solution for silicon photonics**

*Three-year collaboration aims to address critical need for tuneable lasers with compact footprint, scalability, high yield and enable low-cost manufacturing*

**Singapore, 2 Sept 2020** – CompoundTek Pte Ltd, a global foundry services provider in emerging Silicon Photonics (SiPh) solutions, is working with Nanyang Technological University, Singapore (NTU Singapore) on a three-year joint advanced research and development (R&D) collaboration for “O, C, L-band Silicon Photonics tuneable Lasers for Communications and Other Emerging Applications”.

One of the primary objectives of this game-changing collaboration is to develop a high-performance tuneable laser that has a compact footprint and is scalable, high-yield and suited for low-cost manufacturing. By replacing the commonly used array of single wavelength lasers with a single wavelength tuneable laser, this much-simplified design architecture reduces existing complexities of Optical Wavelength Division Multiplexing (WDM) systems, and will additionally lower wavelength contention and inventory costs for commercial products.

The SiPh platform today offers scalability, cost-effectiveness and manufacturability of the matured Si CMOS process. However, one of the key disadvantages of SiPh is the non-availability of highly-efficient silicon laser integrated with SiPh circuits. Hybrid SiPh, integrating SiPh devices with III-V compound semiconductor optical amplifier (SOA), offers the best of both worlds – enabling low propagation loss and high integration densities while providing efficient optical gain and flexibility for spectral engineering. This integration is one of the key research areas at NTU's The Photonics Institute.

This collaboration reinforces CompoundTek's ambitions in advancing R&D to enhance SiPh technology offerings and deliver on the company's commitment to its technology roadmap. Since its launch in 2017, CompoundTek has more than 20 global commercial customers in over nine countries and over 20 leading Research Institutes and Universities in various applications such as telecommunications, automotive LiDAR, data communications, bio-sensing/bio-medical, artificial intelligence (AI), quantum computing and smart sensors.

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## About CompoundTek Pte Ltd

Founded and supported by industry veterans and technologists, Singapore-based CompoundTek combines world-class commercial foundry with leading silicon photonics (SiPh) research institutes to provide cutting-edge SiPh technologies that enhance foundry services capabilities. As one of the elites offering SiPh solutions internationally, CompoundTek brings to the marketplace revolutionary semiconductor applications designed to meet critical requirements in high bandwidth and high data transfer solutions particularly in emerging connectivity driving Industry 4.0. The company's in-depth know-how includes end-to-end technologies - from proprietary fabrication process expertise to product design support with strategic partners and extended services for end-product manufacturing. CompoundTek's global customers span leading brands and FORTUNE 500 companies in high-growth industries including artificial intelligence, automotive, bio-medical diagnostics, data centre, lidar, smart sensor, telecommunication and quantum optical computing.

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