

Comptek Solutions Launches New Cleanroom to Accelerate Advanced Semiconductor Process Development

Featuring unified laser, pilot line, and precision process tools to bridge R&D and industrial-scale semiconductor manufacturing.

TURKU, Finland — 4 December 2025 — Comptek Solutions, a pioneer in passivation and surface engineering for compound semiconductors, has completed a major infrastructure expansion with the opening of new cleanroom facilities at its premises in Turku, featuring ISO 5, ISO 6 and ISO 7 environments.

The new cleanroom strengthens Comptek's ability to deliver advanced surface processing, pilot-scale integration, and optical characterization offerings to semiconductor manufacturers and research partners worldwide.

"Our new cleanroom environment significantly enhances both the precision and throughput of our process development work," said Mr. Vicente Calvo Alonso, CEO and Co-Founder of Comptek Solutions. "It allows us to integrate our proprietary Kontrox™ passivation technology into industrial workflows while expanding our in-house measurement and fabrication capabilities."



Figure 1 Exterior view of Comptek Solutions' new ISO cleanroom facilities, showing the pilot line and external chemistry process station

Integrated Laser, Pilot Line & Process Tools

The new cleanroom hosts Comptek's core laser processing systems, including Kontrox™ LASE 16 Industrial and Kontrox™ LASE 16 R&D Platform for precision treatment of edge-emitting laser facets.

In particular, the ISO 5 cleanroom supports high-precision optical metrology, lithography, and chemistry-based processes, featuring:

- Optical microscope and ellipsometer for ALD oxide thickness measurement
- ALD oxide growth tool and lithography equipment
- Load lock and glove box connected to the EIC-funded, ALD-integrated pilot line, enabling advanced passivation of substrates up to 200 mm using Comptek's proprietary Kontrox™ nanoengineering technique

This unified setup allows flexible sample loading and seamless transition between process development, pilot-scale operation, and in-line characterization under one roof.

Continued Growth and Industry Momentum

This expansion marks the latest milestone in Comptek's ongoing facility upgrades since its founding in 2017 and reflects the company's steady growth alongside rising global demand for advanced passivation technologies in semiconductor manufacturing.

With multiple projects underway across lasers, photonics, power electronics and other applications, the company's new cleanroom capacity is already fully engaged, providing the foundation to deliver consistent, industrial-grade results to both research partners and industrial customers.

Advancing Toward Industrial Integration

Comptek's progress has been made possible through strong support from investors and partners, including the EIC-funded pilot line project, which has played a key role in enabling this infrastructure boost.

"The realization of this milestone is a testament to our team's perseverance, dedication, and collaborative spirit," continued Alonso. "From early-stage research to industrial systems and pilot lines, our team have consistently delivered breakthroughs that are now being translated into tangible, scalable technologies. These facilities represent a major step toward bridging R&D and industrial manufacturing. Our goal is to provide

customers not only with state-of-the-art passivation processes but also with complete tools and know-how to characterize and optimize their materials and devices."

The expansion underscores Comptek's long-term commitment to supporting the rapidly evolving compound semiconductor industry worldwide — particularly for photonics, power electronics, and next-generation optoelectronic devices.



Figure 2 Exterior view of Comptek Solutions' ISO 5 cleanroom, showing pilot line workflow connectivity

About Comptek Solutions

Comptek Solutions is a leading technology provider specialized in turnkey passivation solutions for the compound semiconductor industry. From lasers to microLEDs, spanning power electronics and beyond, our cutting-edge offerings empower manufacturers with enhanced power efficiency and optimized manufacturing processes.

At the core of our success is **Kontrox™**, our breakthrough technology tackling native oxidation in compound semiconductors, enabling significant improvements in power efficiency and manufacturing optimization. With 44 granted and pending patents covering various aspects of our technology, Comptek Solutions is dedicated to driving sustainable innovation and advancing the future of semiconductor technology globally from its tech base in Turku, Finland.

For more information, please visit www.comptek-solutions.com.

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