

Photonics and RF Packaging

R&D expert services and manufacturing for photonics and electronics

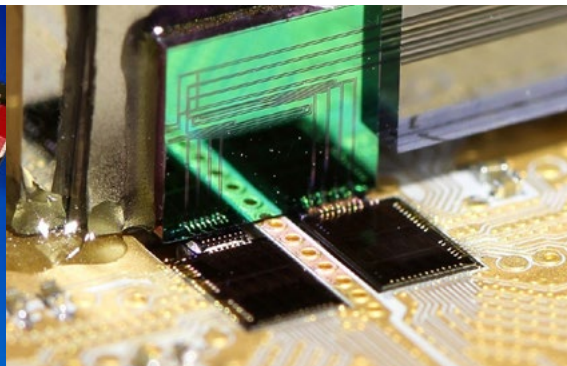
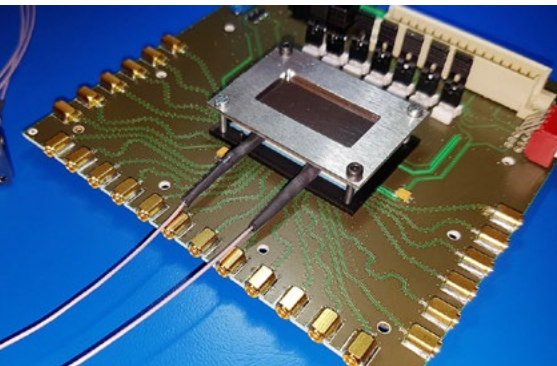
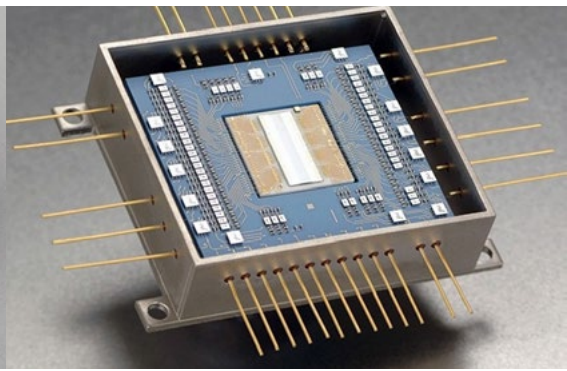
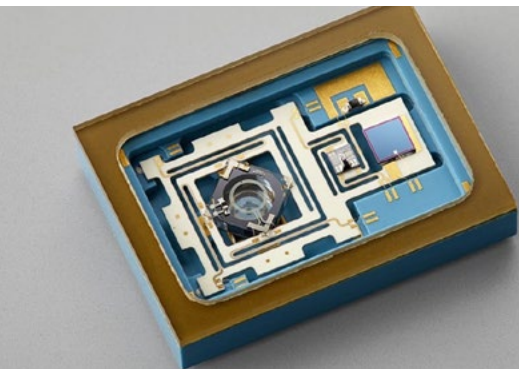
VTT has over 30 years of experience on advanced photonics hybrid-integration and packaging technologies. High-performance photonics modules and instruments are implemented using the in-house manufacturing and assembly processes and the multi-disciplinary design and testing capabilities.

Special benefits:

- Combination state-of-the-art and novel fabrication approaches with already mature processes
- Access to VTT's very extensive partner network on research, photonics component suppliers, high-volume production, system integration, etc.

Application examples:

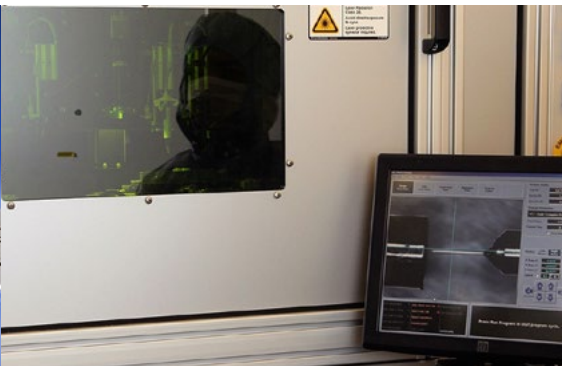
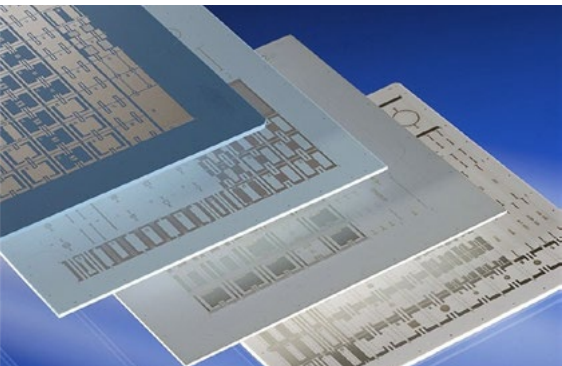
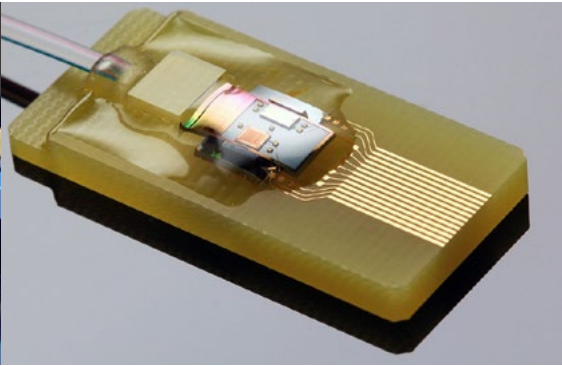
- Sensing
- Communication
- Lighting
- High-reliability; space, military, etc.
- High-volume consumer devices



Assembly and packaging at wafer, chip and module level:

- High-precision photonics assembly
 - Active and passive alignment
- Flip-chip, die attach, soldering and adhesive bonding
- Fiber pigtailing, also with fiber arrays
- Encapsulation and packaging for reliability; including hermetic sealing
- Thermal management; with advanced solutions
- High-performance electronics integration up to mm-wave frequencies

- Chip-scale and wafer-level packaging
- Hybrid integration
 - Si, InP and GaAs chips/wafers
- System-on-Package



Complete offering and unique benefits:

- Photonic Integrated Circuits
 - Thick-SOI silicon photonics
 - Polymer waveguides

- Advanced packaging substrates and interposers
 - Multilayer ceramics circuits and substrates (LTCC)
 - Flexible electronics
- Design
 - PICs, packaging, optics, electronics
- Testing
 - Automated wafer-level testing
 - Testing and characterization of chips and modules
 - Reliability testing

The logo for VTT, consisting of the letters 'VTT' in white, bold, sans-serif font, centered within an orange square.

Get in touch with us:

Piia Konstari

Solution Sales Lead

+358 50 576 3706

piia.konstari@vtt.fi

Mikko Karppinen

Research Team Leader

+358 40 766 0310

mikko.karppinen@vtt.fi

vttresearch.com

beyond the obvious