

Onto Innovation and LPKF are set to accelerate mass production of glass core substrates for semi-conductors

- **LPKF joins Onto Innovation's Packaging Applications Center of Excellence (PACE)**
- **Collaborating partners represent key process steps across the supply chain for panel-level packaging**
- **Partnership accelerates technology roadmap and shortens time to market for glass core substrate production**

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LPKF Laser & Electronics SE joined Onto Innovation's Packaging Applications Center of Excellence (PACE) in 2024. PACE aims to develop seamless process integration and a secure supply chain to accelerate mass production of panel-level packages based on glass cores. These have become essential in the semiconductor architecture to meet the needs of demanding end applications like high-performance computing (HPC), artificial intelligence (AI), cloud computing and machine/deep learning. LPKF's LIDE technology excels in micro-processing defect-free through glass vias (TGV) for advanced glass substrates. Onto Innovation's Firefly® system provides an automated inspection and metrology solution for advanced IC substrates and panel level packaging.

In a further step to enable process and supply chain readiness for high-volume manufacturing of advanced glass substrates and glass interposers, Onto and LPKF are combining their strengths by installing Onto's state-of-the-art Firefly system into the cleanroom facility at Vittrion, LPKF's Center of Excellence for glass processing in Hannover, Germany in the second quarter this year. This collaboration will enable high throughput quality control of glass substrates and glass interposers, thereby reinforcing the industry's move toward efficient, high-yield production.

"Our collaboration within PACE has already delivered excellent results," says Dr. Roman Ostholt, Managing Director LIDE at LPKF. "Glass offers the potential to drastically reduce the cost of interposers without sacrificing chip quality. The installation of Onto's Firefly system marks the next step in this partnership and further strengthens our joint commitment to providing a high-volume manufacturing solution for advanced packaging applications."

"Onto Innovation is honored to collaborate with industry leaders like LPKF for innovations on glass panels," says Mike Rosa, chief marketing officer and senior vice president, strategy at Onto Innovation. "The integration of our Firefly system for TGV process control at Vittrion marks a significant milestone in advancing the quality and reliability of glass substrates and interposers. Together, we are dedicated to driving forward these advanced packaging applications."



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ABOUT ONTO INNOVATION

Onto Innovation is a leader in process control, combining global scale with an expanded portfolio of leading-edge technologies that includes un-patterned wafer quality, 3D metrology spanning chip features from nanometer scale transistors to large die interconnects, macro defect inspection of wafers and packages, metal interconnect composition, factory analytics, and lithography for advanced semiconductor packaging. Our breadth of offerings across the entire semiconductor value chain combined with our connected thinking approach results in a unique perspective to help solve our customers' most difficult yield, device performance, quality, and reliability issues. Onto Innovation strives to optimize customers' critical path of progress by making them smarter, faster, and more efficient. With headquarters and manufacturing in the U.S., Onto Innovation supports customers with a worldwide sales and service organization. Additional information can be found at www.ontoinnovation.com.

ABOUT LPKF

As a high-tech mechanical engineering company, LPKF develops high-precision, scalable manufacturing processes that are used in growth markets such as semiconductors & electronics, life science & medical technology, smart mobility and research & development. Founded in 1976, the company is headquartered in Garbsen near Hanover and operates worldwide through subsidiaries and representatives. LPKF employs over 750 people and is committed to driving technological advancement with innovative solutions, aiming to create a sustainable positive impact on the world. The shares of LPKF Laser & Electronics SE are traded on the SDAX of the German Stock Exchange (ISIN 0006450000).

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