
Online Forum SdK

TOMORROW'S TECHNOLOGY TODAY

November 2025 | Dr. Klaus Fiedler, CEO



GLOBAL PLAYER



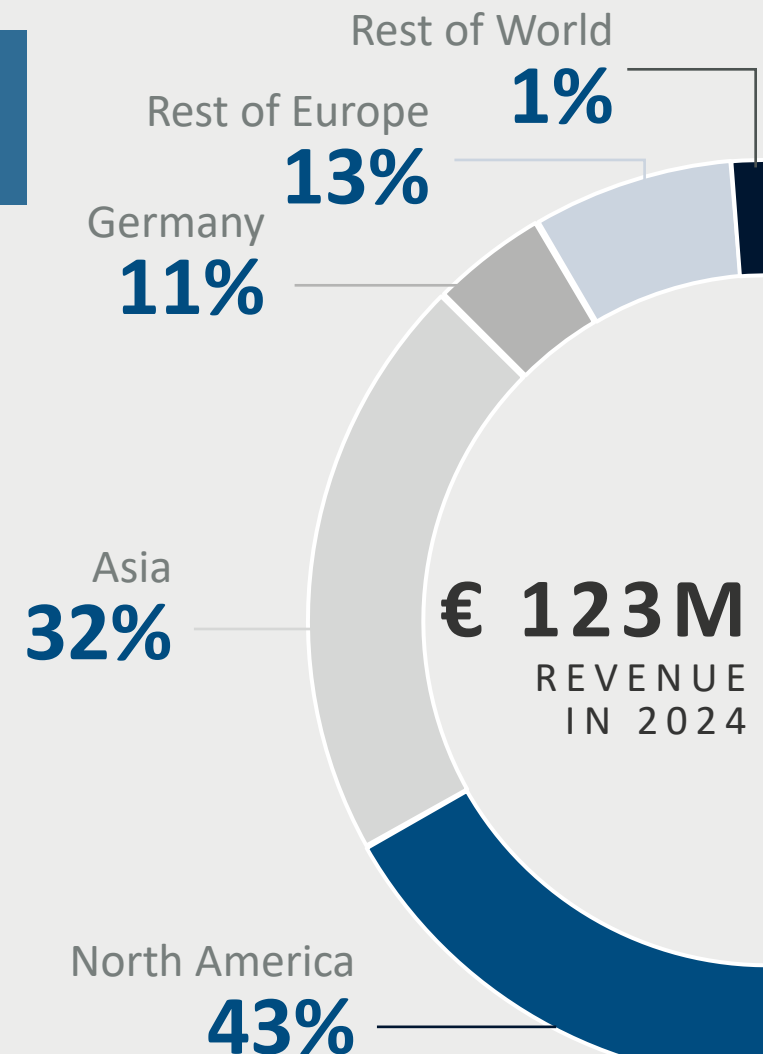
LPKF is a globally active technology company based in Garbsen, Germany. Our expertise is in the fields of precision laser processing, microsystems technology, application know-how, and software together with training and professional support. Investing in the development of innovative processes provides our customers with competitive advantages and open up new growth markets.

49 years
of experience

700 dedicated
employees (FTE)

>14% of revenue
invested in R&D

Active in
>60 countries





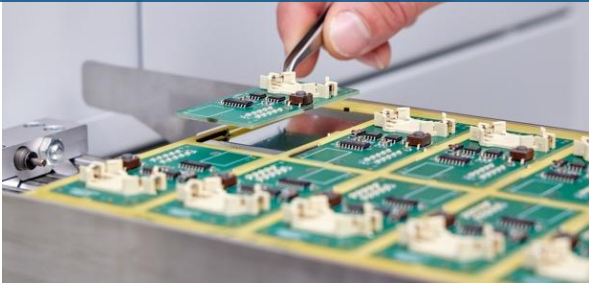
OUR CORE BUSINESS & NEW MARKET INITIATIVES



CORE BUSINESS

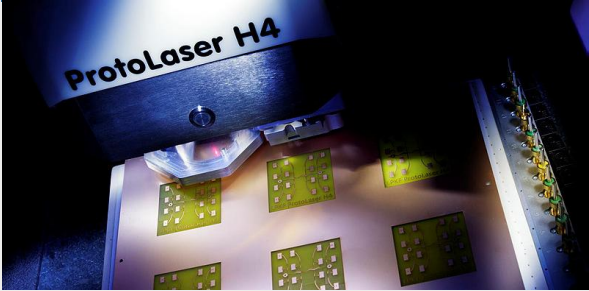
— ELECTRONICS

DEPANELING & SURFACE-MOUNT TECHNOLOGY



— DEVELOPMENT

RAPID PCB PROTOTYPING



— WELDING

PLASTIC WELDING



— SOLAR

THIN-FILM LASER PROCESSING



NEW MARKETS

— ELECTRONICS/SEMICONDUCTOR

LIDE IN ADVANCED PACKAGING



— ELECTRONICS/DISPLAY

LIDE IN GLASS MICRO PROCESSING



— DEVELOPMENT/BIOTECH

ARRAYIZE FOR SINGLE CELL BASED RESEARCH

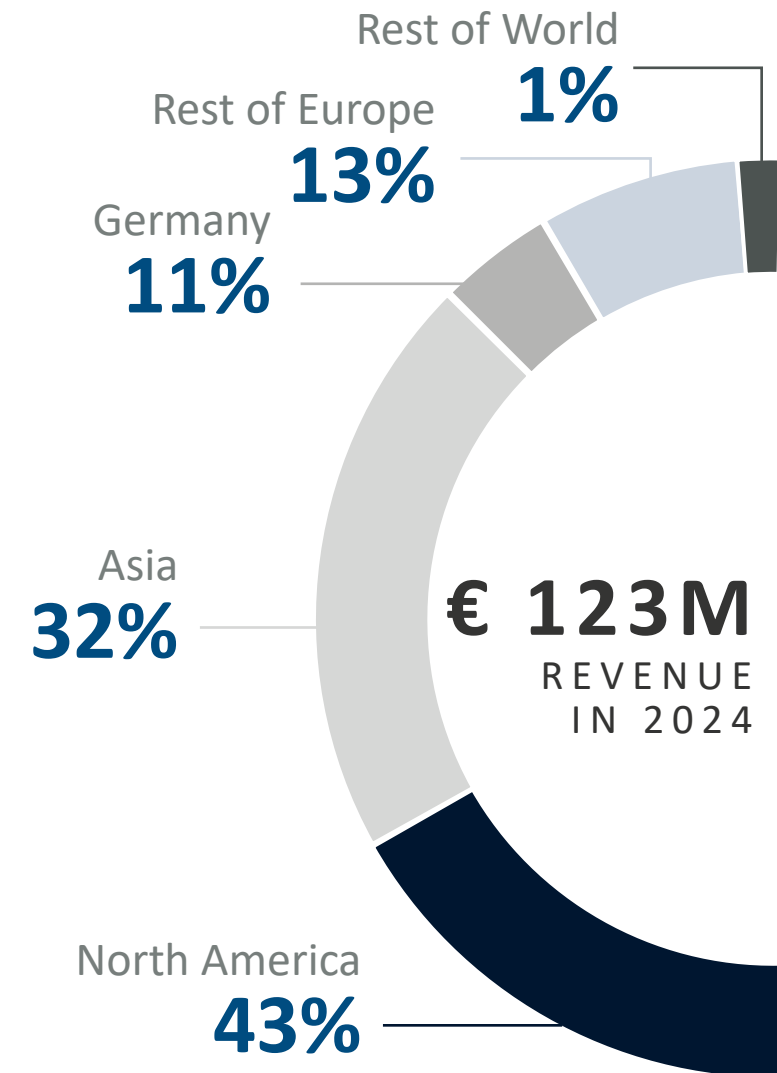




KEY TAKEAWAYS FROM 9M/Q3 2025

- **Slight revenue growth despite difficult conditions:** Revenue rose by 2% to EUR 83.9 million in the first 9 months of 2025. Revenue dropped by 9 % in the third quarter to EUR 24.8 million due to a very weak second quarter.
- **Order situation:** Order intake reached €65.4 million after nine months, down from €84.1 million last year due to weak Q2 performance and absence of Solar orders.
- **Segment performance mixed:** Growth in Electronics, Development and Welding but decline in Solar.
- **Strong dynamics in Advanced Packaging** sector with over 80% of customers selecting LPKF.
- **Cost saving measures:** Show further improvement in earnings (adjusted EBIT was EUR -0.8 million after EUR -5.1 million in the previous year).
- **Project North Star:** Launched in September to boost profitability and ensure competitiveness. Objective: Achieve a double-digit EBIT margin and strengthen resilience against revenue fluctuations.

LPKF





BUSINESS DEVELOPMENT IN Q3 2025



MARKET SITUATION



- Stable demand for Rapid Prototyping and strong recovery of Electronics orders in Q3 after tariff clarification
- Ramp up preparations running for LIDE in advanced packaging, while Display market penetration still slow
- Limited investment activity for thin-film solar continues, with market preparing for switch to Perovskites
- Demand for laser welding is picking up in Medical markets, while automotive continues to be very slow



BUSINESS DEVELOPMENT



- With over 80% of customers having selected LPKF for advanced packaging, we will shortly expand our portfolio to offer additional process steps
- Continuous TCO improvements in laser dpaneling drives growth in Electronics, with design wins in large key accounts
- Perovskites as a new thin-film solar technology continues to be in focus, with no clear outlook yet on high-volume ramp-up
- New product line ATA demonstrated to broad customer base at K trade show



OPERATIONS



- Operational execution on track with no significant bottlenecks
- Cost reductions implemented in 2024 show significant positive impact on 2025 bottom line
- Continued focus on working capital reduction
- Project North Star has been launched to implement structural efficiency improvements

Strategic Growth Field Advanced Packaging

STATUS AND OUTLOOK



ADVANCED PACKAGING: HETEROGENEOUS INTEGRATION AND GLASS

SEVERAL MONOLITHIC CHIPS ARE PACKED INTO ONE



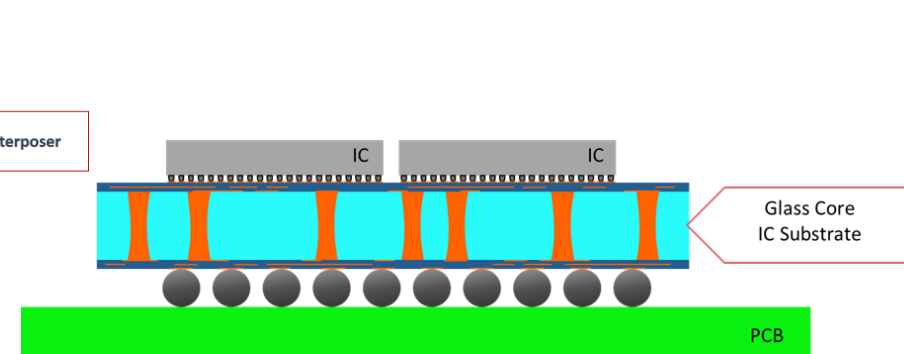
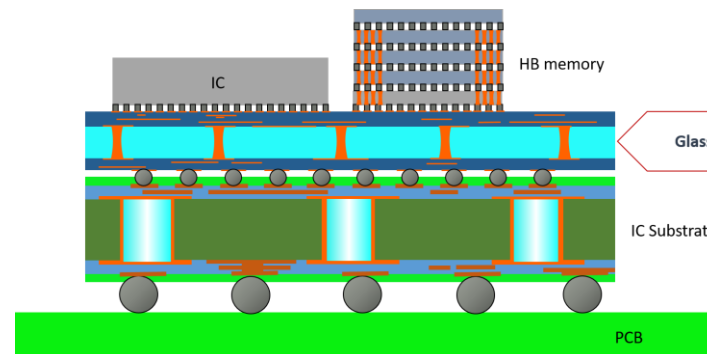
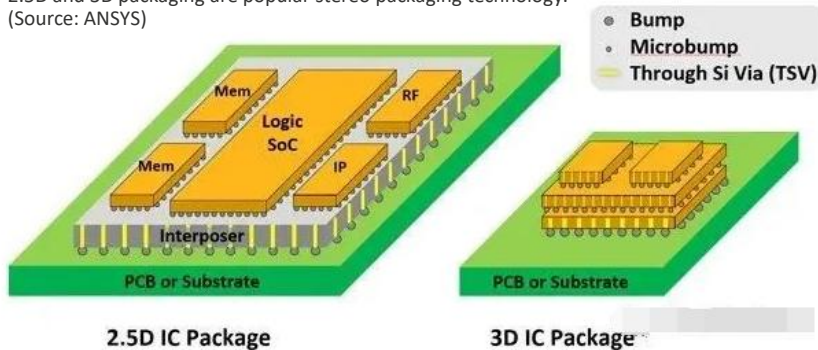
- More performance (computing power of chip is combined with new components for high communication speeds)
- Reduced costs (less large/expensive silicon elements)
- Supply chain becomes more resilient (combination of different chip manufacturers and their strengths)

BENEFITS OF GLASS SUBSTRATES AND INTERPOSERS



- Superior mechanical, physical, and optical properties
- Enables larger sizes and complex shapes
- Better scaling and higher yields
- Lower power consumption

2.5D and 3D packaging are popular stereo packaging technology.
(Source: ANSYS)





LG Innotek to Begin Pilot Production of Glass Substrate by Year-end



Kim Eun-jin | 승인 2025.01.13 10:14

In addition to FC-BGA, LG Innotek is also set to begin pilot production of glass substrates by the end of this year. These substrates are expected to play a crucial role in the future of communication semiconductors and high-performance server applications. Moon predicted, "In 2 to 3 years, glass substrates will start being used in the field of communication



JNTC Unveils Next-Generation Glass Substrate for Semiconductors

PRESS RELEASE by Nomad76 | Jul 14th, 2025 16:28 | Discuss (1 Comment)

"TGV glass substrates are emerging as critical components in next-gen semiconductor packaging," Cho said. "We have secured a clear edge in quality and cost, and are currently working with 16 global partners across the semiconductor ecosystem. This launch signals our ambition to become a leading global player in precision glass materials."



Tech News: TSMC Advances into Panel-Level Advanced Packaging Technology

SMYG LIMITED 1,061 Followerinnen

21. Juni 2024

In response to the burgeoning demand for advanced packaging technologies driven by AI applications, TSMC is gearing up to introduce a breakthrough in its packaging capabilities. Reports indicate TSMC's plans to adopt Panel Level Fan-Out (PLFO) packaging, promising output capacities several times higher than current advanced packaging technologies.



AMD is reportedly set to use glass substrates for CPUs between 2025 and 2026

News By Anton Shilov published July 11, 2024

Glass substrates offer significant benefits over conventional organic substrates.



Samsung Electro-Mechanics drilled Broadcom with a glass substrate

KIPOST | Input 2025.11.03 10:00 | Revision 2025.11.03 12:29 | 0 Comments

Started evaluation of glass core substrate samples Consideration of capital investment of up to 20,000 pieces per month

Samsung Electro-Mechanics will supply semiconductor glass substrates to ASIC (Custom Semiconductor) company Broadcom. Broadcom is designing semiconductors for AI (artificial intelligence) servers at the request of Google, Meta, OpenAI, and Apple. In the future, Samsung Electro-Mechanics is likely to be supplied to global big tech companies through Broadcom.



TSMC said to adopt larger glass substrates for FOPLP

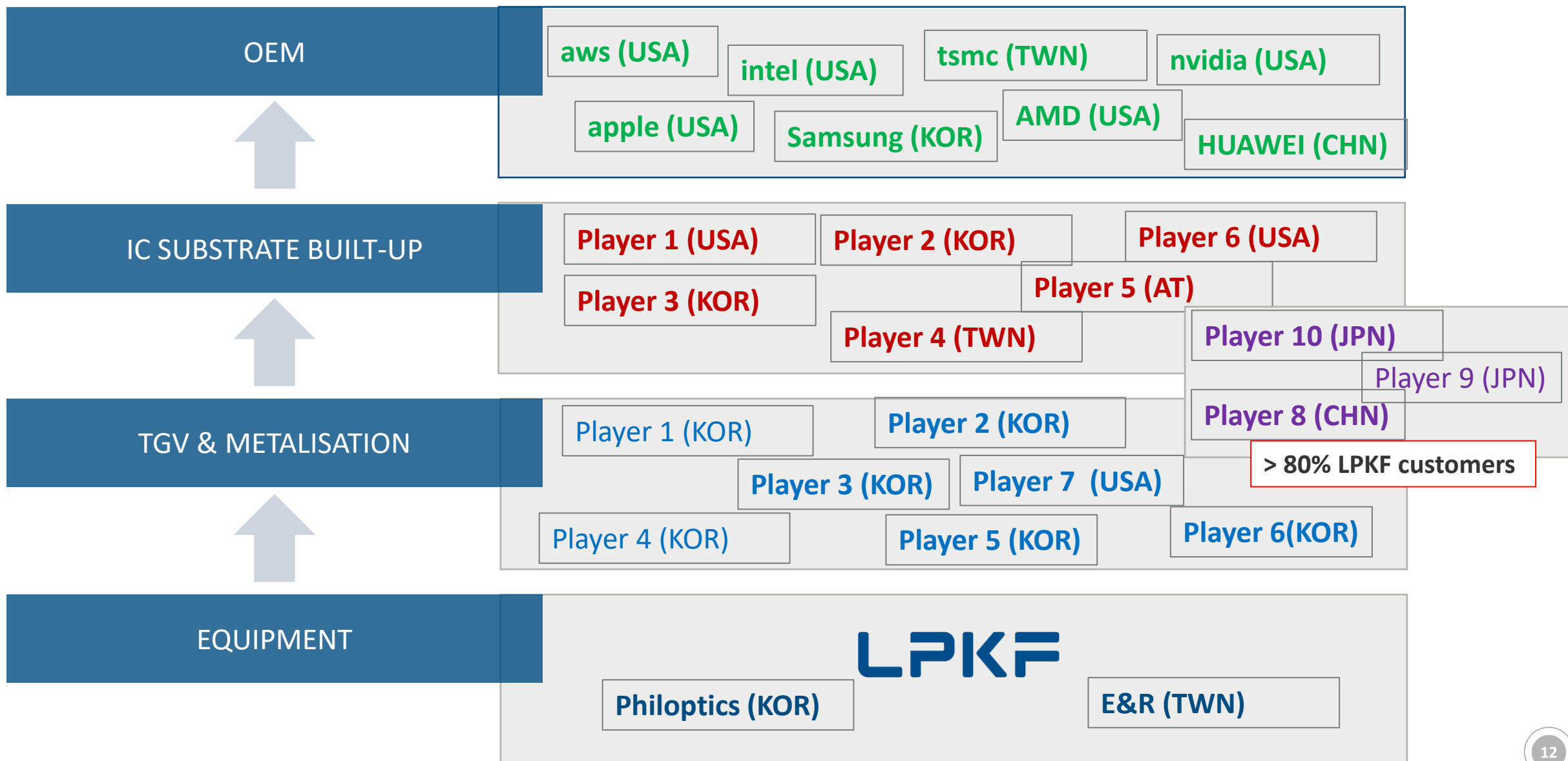
Rebecca Kuo, Tainan; Rodney Chan, DIGITIMES Asia | Wednesday 24 July 2024 | 0





MARKET LANDSCAPE

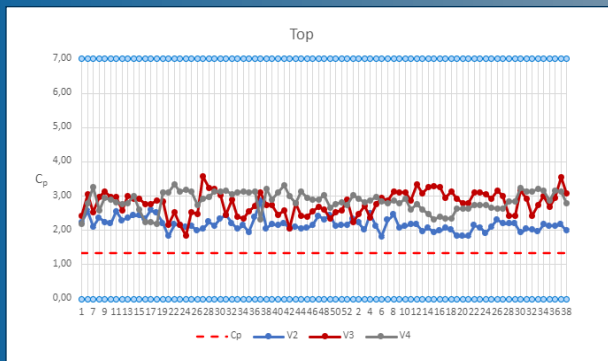
LPKF





Unmatched maturity of LIDE process and process equipment proven by statistics

- Process protected by strong global IP
- Long-term stability of process and equipment data available
- Double-digit number of installed tools at customers worldwide
- SEMI compatibility (S2, S8)
- Cleanroom compatibility



UNLOCKING NEW OPPORTUNITIES IN ADVANCED PACKAGING TECHNOLOGIES



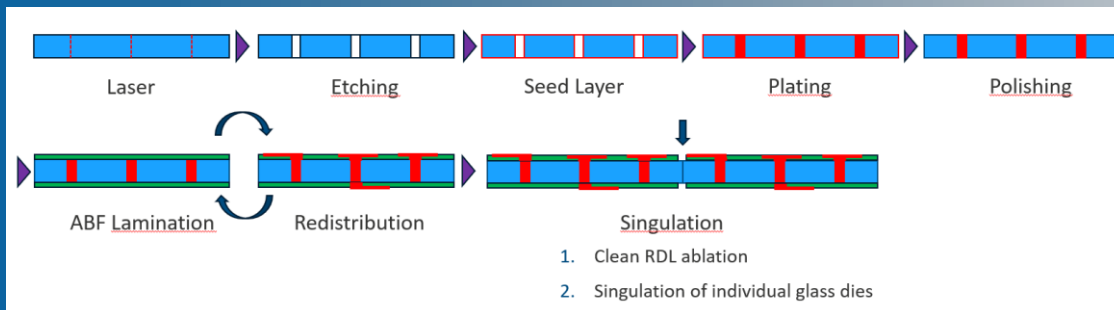
Strategic opportunity

LPKF is now expanding its portfolio to include additional process steps for semiconductor production beyond LIDE technology.

LPKF will leverage its proven expertise in LIDE to address further high-precision demands across the semiconductor manufacturing chain.

Manufacturing high-performance chips or chiplets requires flawless execution of a series of rigorous process steps.

Critical precision: Just one error can result in the loss of extremely valuable chips.



The crucial role of singulation

Final process step: Separating dies from panels is critical to ensure chip integrity.

Customers demand a zero-damage process to protect expensive chips.

LPKF leads in depaneling techniques with unparalleled expertise and technological know-how.

Tensor Technology: Proprietary solution to efficiently remove RDL layers with outstanding precision, high processing speed, exceptional gentle handling

Outlook

LPKF will offer this innovative die singulation process to semiconductor customers within the current fiscal year.

NEXT STEP: CO-PACKAGED OPTICS (CPO) WITH GLASS SUBSTRATES

What is CPO (Co-Packaged Optics)?

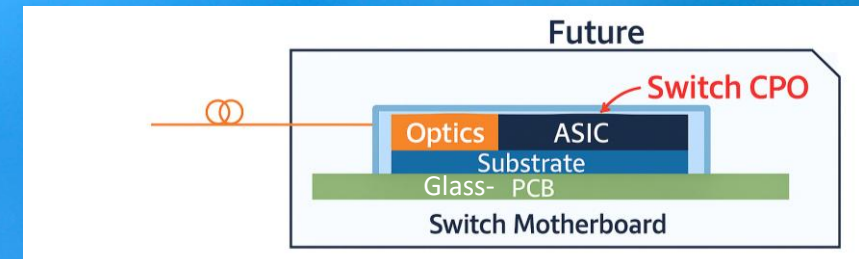
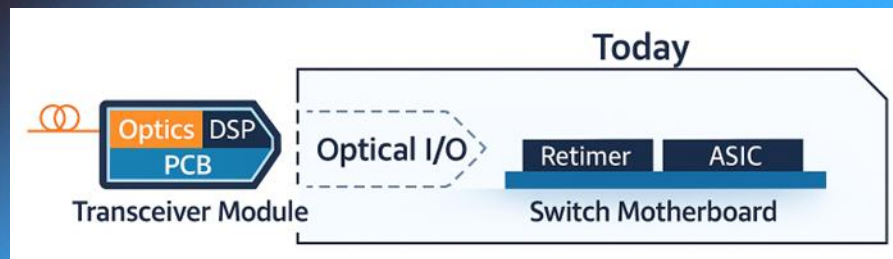
- Integrates optical components directly into the same package as the chip.
- Replaces electrical data transmission with faster, more energy-efficient optical links.
- Critical for data centers, AI workloads, and high-speed networking.

Conclusion

Glass substrates combined with Co-Packaged Optics (CPO) represent a major breakthrough in semiconductor packaging. They enable a scalable chip architecture for next-generation computing

Why Glass Substrates Matter in CPO

- Superior Electrical Performance: Enables faster data transmission for optical interconnects.
- Dimensional Stability: Reduces warping and shrinkage in large, complex chip packages.
- Thermal Efficiency: Handles higher power densities, ideal for AI and HPC.
- TGV Compatibility (Through-Glass Via): Allows vertical electrical connections, essential for advanced packaging.



Q2 Financial Report 2025

GUIDANCE & OUTLOOK



REVISED 2025 GUIDANCE AND MID-TERM ASPIRATION



Actuals 2024

Revenue:

EUR 122.9 million

EBIT margin:

-2.1%

Adjusted EBIT margin*:

0%

Guidance FY 2025

Revenue

EUR 115 – 125 million

(prev. EUR 125 - 140 million)

Adjusted EBIT margin*

0 – 5 %

(prev. 6 - 9%)

*Adjusted EBIT is EBIT adjusted for restructuring and severance costs, effects from changes in the scope of consolidation and changes in the long-term incentive (LTI) due to fluctuations in the performance factor or the share price. LPKF expects these costs to amount to 1-2% of revenue in the 2025 financial year.

Mid-Term Aspiration

- The board aims to achieve a sustainable double-digit EBIT margin for the group.
- **Semiconductor Market:** Strong strategic positioning with LIDE technology and expanded product portfolio offering substantial growth potential.
- **SMT and Rapid PCB Prototyping:** Solid growth prospects.
- **Solar:** Despite current weakness, the transition to perovskite technology is seen as a promising growth opportunity.
- **Welding:** Strategic realignment expected to yield long-term profitable growth.
- Structural adjustments are crucial to ensure LPKF's resilience and competitiveness, as no significant short-term growth impulses are expected amidst economic uncertainty.

The LPKF logo is displayed in the top right corner in a bold, blue, sans-serif font. The background of the entire image is a photograph of a modern office or laboratory. In the foreground, two men are looking at a tablet together. The man on the left is wearing a light blue button-down shirt and dark trousers, while the man on the right is wearing a white button-down shirt and blue trousers, holding a white mug. In the background, other people are working at desks with various electronic equipment.

LPKF

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LPKF Laser & Electronics SE

THANK YOU!

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Q&A



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