

Laser Plastic Welding: Successful Market Launch of LPKF's Absorbing-to-Absorbing Technology

- Specialized solution for welding two absorbing plastic components successfully introduced to the market
- Integrated thermography enables process monitoring in series production and product optimization in prototype development

GARBSEN/FÜRTH, Germany, April 22, 2026 – LPKF Laser & Electronics SE is reporting positive response from industry just one year after the market launch of its Absorbing-to-Absorbing technology (ATA). As one of the first adopters, the Schaeffler Group is already successfully using the innovative laser plastic welding process for the development of e-mobility components. The ATA process enables the laser welding of two absorbing plastic components, opening up new design possibilities for both prototyping and series production.

Technological Breakthrough Expands Design Freedom

The Absorbing-to-Absorbing technology advances laser plastic welding by overcoming the previously required transparent-to-absorber principle. Designers can now use absorbing materials for both plastic components to be welded, creating significantly greater design freedom. The integrated thermography monitoring enables precise process control and continuous product optimization.

New Possibilities for Diverse Requirements

The ATA process is suitable for prototyping and R&D applications as well as for series production. "The market response to our ATA process shows that we have closed a real gap in laser plastic welding with this technology," says Luis Huber, Product Manager at LPKF. "We see enormous potential particularly in consumer electronics and e-mobility, where industry demands innovative solutions for complex systems. In addition, designers working in the medical device sector are already developing their first projects using the new process."

Flexibility and Efficiency for R&D and Series Production

Schaeffler is deploying the ATA technology at its German facility in Dortmund for the development of cooling systems in electric vehicles. Compared to conventional processes such as infrared welding, ATA offers clear advantages: complex masking or metal foils are no longer required, design changes can be implemented quickly, and energy efficiency is significantly higher.

"The ATA process has opened up design possibilities that we simply did not have before," says Marc Emig, Head of Prototype Manufacturing at Schaeffler. "Our current product could not have been manufactured using conventional welding processes. Standard methods reach their limits particularly with complex geometries involving numerous small channels and weld seams. The integrated thermal camera serves us as an important analysis tool for evaluating the temperature distribution on the component and enables targeted process optimizations."

More information on Absorbing-to-Absorbing from LPKF:

Pressinformation

<https://www.lpkf.com/en/industries-technologies/laser-plastic-welding/ata-absorbing-to-absorbing-welding>

ABOUT LPKF

As a leading laser technology company, LPKF develops high-precision, scalable manufacturing processes for key industries including semiconductors, electronics manufacturing, medical technology, automotive, solar and research & development. Our solutions address key growth markets such as advanced packaging, smart mobility, and next generation photovoltaics. Founded in 1976, the company is headquartered in Garbsen near Hanover and operates worldwide through subsidiaries and representatives. LPKF employs over 700 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 listed on the Frankfurt Stock Exchange in the Prime Standard segment (ISIN 0006450000).

ABOUT SCHAEFFLER

The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for 80 years. With innovative technologies, products, and services for electric mobility, CO₂-efficient drives, chassis solutions and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and sustainable – over the entire life cycle. Schaeffler describes its comprehensive range of products and services by means of eight product families: From bearing solutions and all types of linear guidance systems through to repair and monitoring services. Schaeffler is with around 110,000 employees and more than 250 locations in 55 countries, one of the world's largest family-owned companies and one of Germany's most innovative companies.

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