

## Innovative tool technology: LPKF Dual Clamping Device

### Highest process stability and short cycle times in laser plastic welding thanks to DCD

**Contact:**

Cordula Krause-Widjaja  
cordula.krause-widjaja@lpkf.com  
Tel. +49 (0)5131 7095-1327  
Fax +49 (0)5131 7095-90

**LPKF  
Laser & Electronics AG**  
Osteriede 7  
D-30827 Garbsen  
www.lpkf.de

**Board of Managing Directors:**

Dr. Götz M. Bendele (CEO)  
Christian Witt (CFO)

**Shares:**

Prime Standard  
ISIN 0006450000

Print free of charge, copy requested

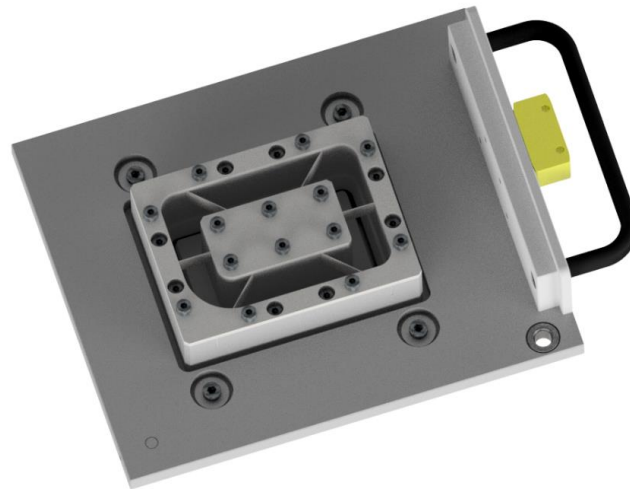
» [Other press releases](#)

**Ensuring a uniform contact pressure during laser welding of plastic components is an important quality criterion. This is because the weld seam achieves optimum quality only at constant pressure across the entire welding area. In most systems, glass tools perform this task because of their laser transparency. With the Dual Clamping Device (DCD), LPKF has an innovative solution that offers many advantages over glass.**

The tool developed and patented by LPKF is unique – and has already proven itself a hundred times over: The Dual Clamping Device (DCD), an internal and external clamping system, is made of metal. Due to its special design with a channel for the laser beam and several specially shaped, fine holding bars that do not interfere with the weld, the DCD enables reliable, deformation-free welding seams. Even after many production cycles, consistently high-quality welding results are guaranteed.

The DCD can therefore overcome the disadvantages of glass tools. Glass becomes sooted due to irradiation with the laser. Particles are bound to the material, which impair the ability of the laser beam to pass through the glass. As a result, the quality of the weld may suffer. To prevent this problem, the glass must be cleaned or replaced regularly, resulting in production interruptions. Handling is often cumbersome, and the glass can break during the cleaning process and must then be reordered and reinserted. Especially in the case of a large production throughput, this process is not only annoying, but it can also severely affect profitability.

Thanks to the DCD, users of LPKF laser plastic welding systems can dispense with glass as a clamping tool and avoid the often extensive handling of glass in production. This ensures maximum process stability and short cycle times. At the same time, the DCD is so robust that damage is virtually impossible. For small component changes, the mold can be easily modified – in contrast to a glass plate, where modification is costly or not feasible.



**Figure:** The LPKF Dual Clamping Device (DCD) is easy to install. The design with the fine but robust retaining bars can remain in place for thousands of application cycles.

#### **About LPKF**

LPKF Laser & Electronics AG is a leading provider of laser-based solutions for the technology industry. Laser systems from LPKF are key elements in the manufacturing of printed circuit boards, microchips, automotive parts, solar modules, and many other components. Founded in 1976, the company is headquartered in Garbsen, near Hannover, Germany, and has subsidiaries and representative offices throughout the world. Around 20 percent of the workforce is engaged in research and development.