

Combining Laser Plastic Welding and  
Molded Interconnect Devices  
Innovative WeLDS Technology by LPKF



Already  
proven successful  
in millions of  
units

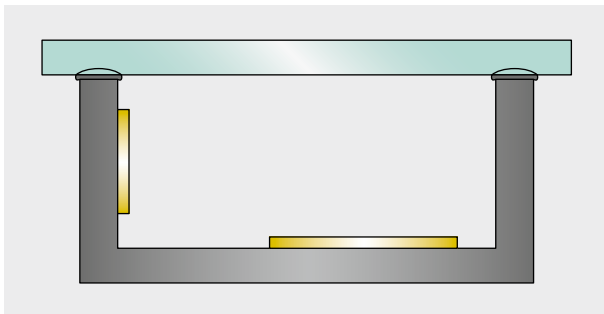
# Benefit from In-depth Know-how in Two Worlds from one Single Source!

WeLDS combines 3D MIDs with laser plastic welding. LPKF's Laser Direct Structuring produces conductive traces on the surfaces of injection-molded parts. Laser Plastic Welding by LPKF provides visually and functionally outstanding weld seams for reliable joints in your component design.

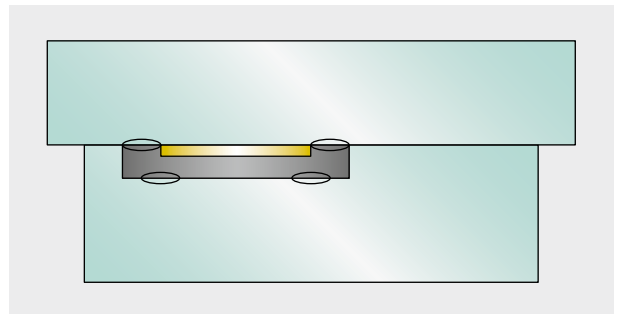
## Your WeLDS Benefits

- Substantial new opportunities for component design
- Miniaturization and weight reduction
- Increased functional integration (3D trace structures, antennas, switches, connectors and sensors)
- Low initial costs, high cost-effectiveness in series production
- High pressure resistance and vacuum tight protection of sensitive elements
- Clean joining: no released particles, no solvents, no chemical treatment, no surface damage
- Very fine resolution of electrical circuits, even in 3D
- Weld joints are possible close to sensitive parts
- Flexible with process monitoring during welding for safety relevant applications

**WeLDS technology has already proven highly efficient in large series production.**



LDS structures (gold) can be placed in areas where this was not possible before, e. g. compact, closed components



The use of LDS material (grey) can be limited to specific areas that are subsequently welded form-fittingly to the larger part

## LPKF's Unique Expert Knowledge for your Success!

- Proven expertise over decades with LDS and Laser Plastic Welding applications
- Complete support from material evaluation and design phase to ramp up and mass production
- This results in reduced time-to-market with minimum project risk
- Extensive experience in automatization as well as customization for various applications and industries

