

Laser material processing as a service

Company presentation and range of services

- Service provider for micro material processing with lasers since 1989
- Specialist for process development and series production with various laser technologies
- 20 employees
- 1000m² production and office area
- 40 m² class 5 clean room
- Production sites in Garbsen and Fürth
- Certified according to DIN EN ISO 9001:2015

Laser Plastics Welding



Laser Plastics Welding

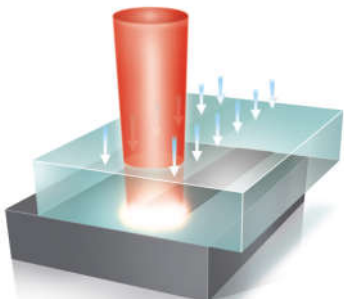
- Safe, economical and hygienic joining process
- Prototyping, small and large series production also in clean room
- Extensive experience in products for the electronics, automotive and medical industries
- Reliable quality monitoring in the welding process



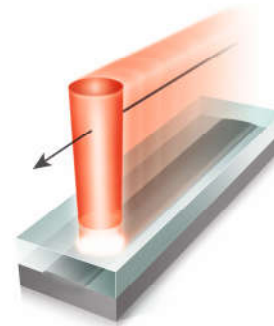
LPKF PowerWeld 6600

Laser Plastics Welding

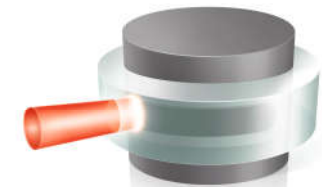
Welding process



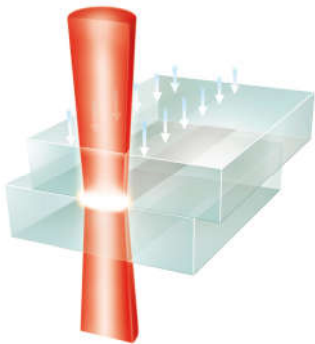
Laser Plastics Welding



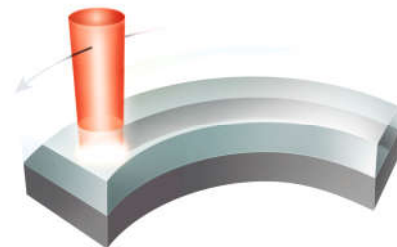
Quasi-simultaneous welding



Radial welding



Clear Joining



Contour welding

Laser Plastics Welding

- Manufacturing on near-series equipment
- Support in the design of new products
- Support in the selection of materials
- Engineering of suitable clamping tools



LPKF PowerWeld 2600

Laser Plastics Welding

- Series accompanying tests
 - Leakage measurement
 - Bursting pressure test up to 50 bar
 - Tensile/compression testing
 - Transmision measurements



Transmission measurement system TMG3



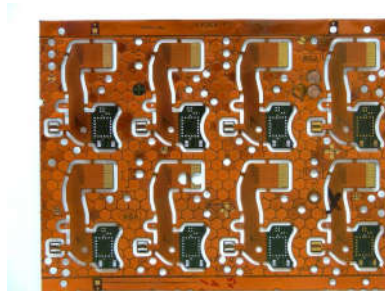
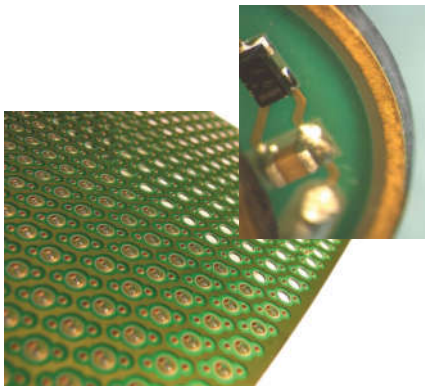
Laser cutting and patterning technology

- Depaneling
- Printed circuit board processing
- Stainless steel processing
- Ceramic processing
- Structuring of conductive layers
(e.g. ITO)



Laser Cutting and Patterning Technology \ Depaneling

- Stress-free depaneling of assembled printed circuit boards
- Rigid, rigid/flex and flex material
- Panel size max. 533 mm x 610 mm
- CleanCut Technology
- Mounting height max. 27 mm (top side) and 4 mm (bottom side)
- Design & manufacture of ESD-compliant fixtures



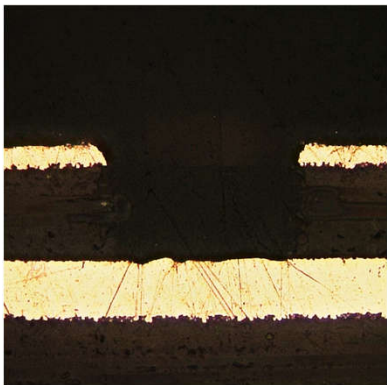
LPKF CuttingMaster 2000



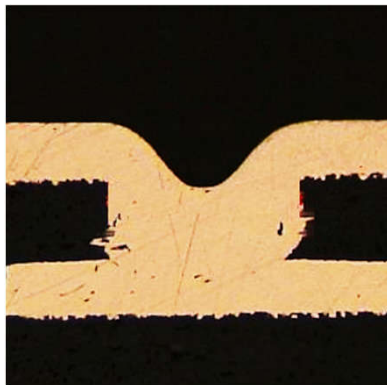
LPKF CuttingMaster 3000

Laser Cutting and Patterning Technology \ PCB Processing

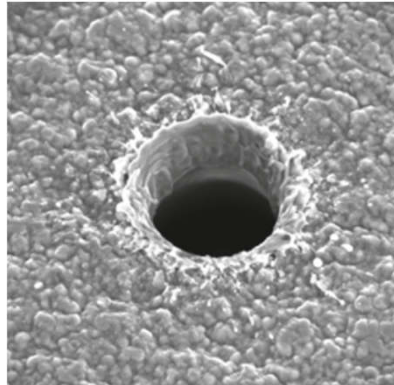
- Precise cutting and drilling of printed circuit boards
- Rigid, rigid/flex and flex material
- Hole diameter min. 20 μm
- Material size max. 533 mm x 610 mm
- Positioning accuracy +/- 20 μm



100 μm Blindvia in FR4



100 μm Blindvia in FR4

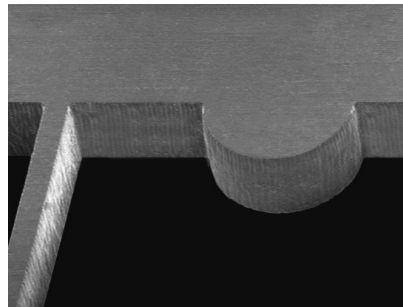
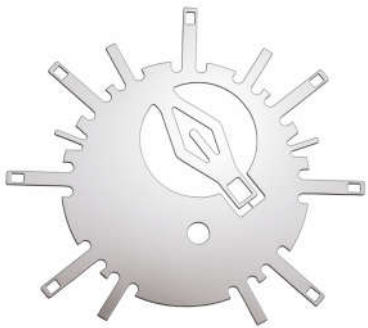


30 μm Via in Flex.



Laser Cutting and Patterning Technology \ Stainless Steel Processing

- Precise cutting of sheet metal parts made of stainless steel
- Material thickness min. 20 μm to max. 1000 μm
- Material size max. 666 mm x 1600 mm
- Radii min. 10 μm
- Burr-free and right-angled cutting edges

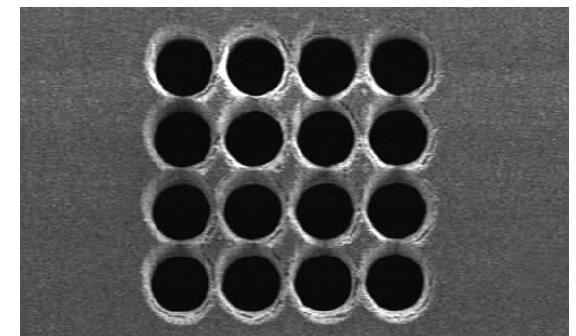
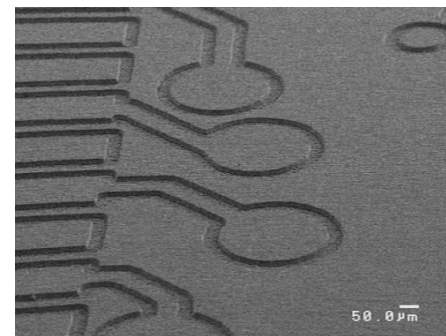
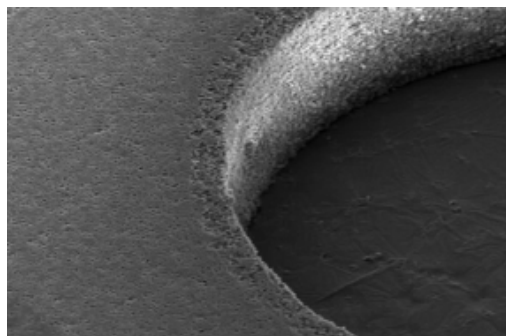
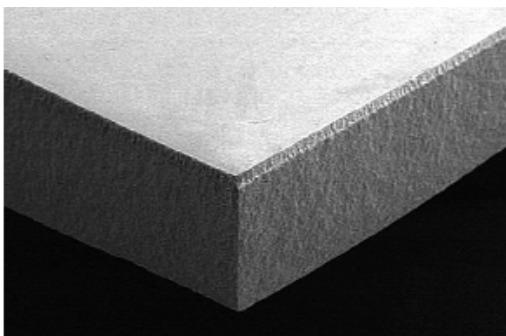
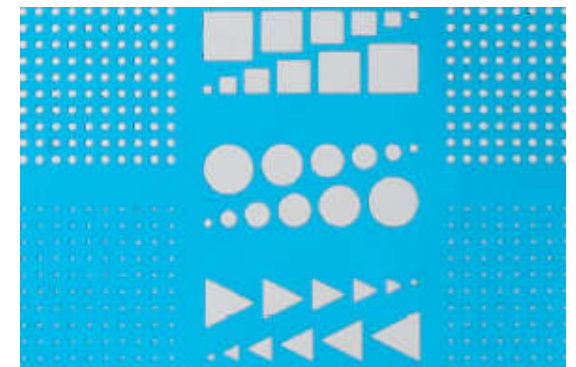
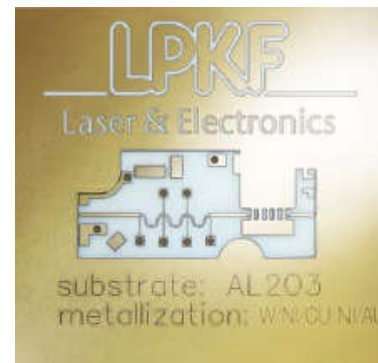


LPKF PowerCut 6080

Laser Cutting and Patterning Technology \ Ceramics

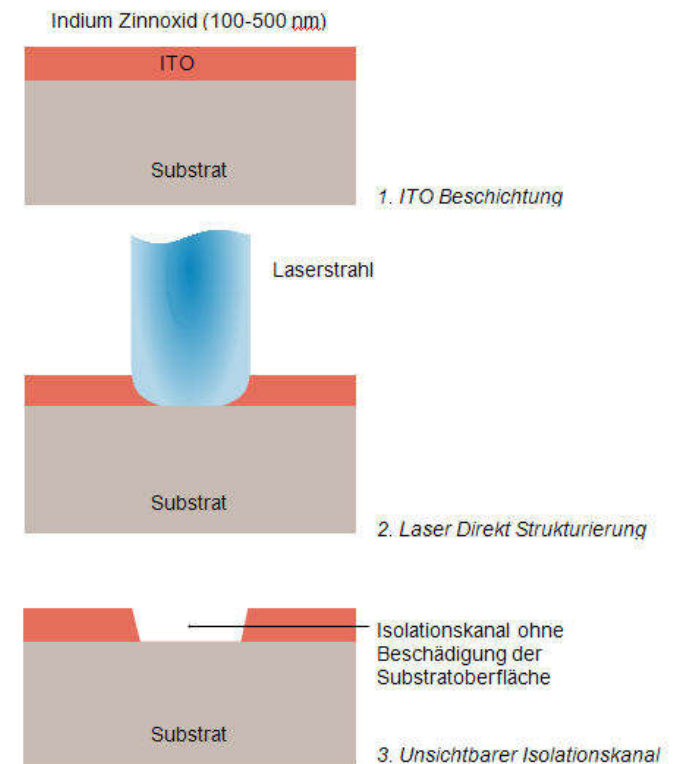
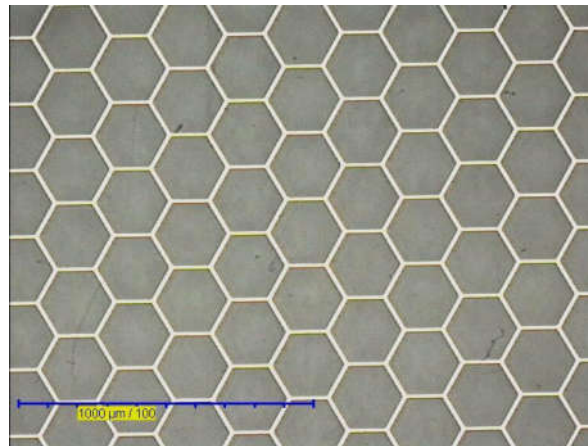
Precise cutting, scribing and engraving of:

- Silicon nitride (Si_3N_4)
- Aluminium oxide (Al_2O_3)
- Aluminium nitride (AlN)
- Zirconium Oxide (ZrO_2)
- LTCC (Low Temperature Co-fired Ceramic)
- Ceramic composites



Laser Cutting and Patterning Technology \ ITO

- Invisible structuring of transparent ITO coatings
- Structures with < 50 µm lines/spaces
- Alignment via fiducials
- Use of glass or PET substrates
- Cutting of substrates possible



Contacts

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Laser Cutting and Patterning



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Thank you!

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