

Tabletop System for Laser Structuring of PCBs

LPKF ProtoLaser ST

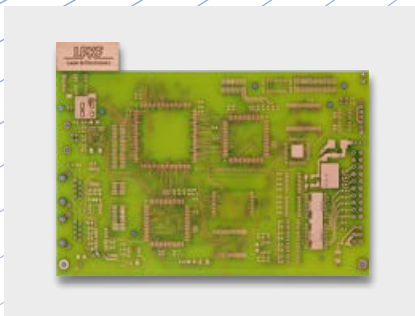
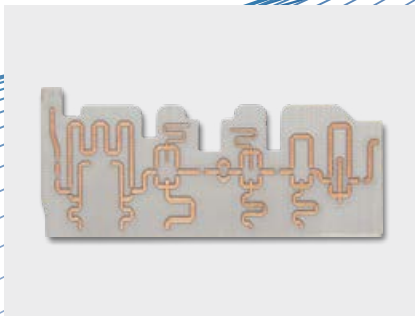
Highest mechanical resolution, exact geometries,
best repeatable accuracy

Compact and safe as tabletop system: suitable for
laboratories, laser class 1

For almost all common printed circuit board materials

PCB prototyping and on-demand production of
customer-specific small batch series

Intelligent, intuitively operable system software



LPKF ProtoLaser ST – PCB Structuring with Tabletop Laser System

The upgrade for your laboratory: With the compact LPKF ProtoLaser ST, surfaces can be precisely processed, and laser-etched PCBs with exact geometries can be created in just a few minutes. The PCB prototypes are manufactured in an extremely material-friendly process. This is made possible through the combination of the IR fiber laser source's high cutting power and the high cutting speed achieved by the scanner-based process. With its compact tabletop format, the LPKF ProtoLaser ST can be used in any laboratory for processing materials from FR4 to sensitive RF substrates.

Fast processing, wide range of materials, reliable process results in the laboratory! The LPKF ProtoLaser ST enables efficient prototyping of complex digital, analog, RF and microwave circuit boards. The laser system achieves exact geometries on almost any material and is ideal for creating single or double sided circuit boards, antennas, filters and many applications where precise, steep sidewalls are required.

With additional equipment, the LPKF ProtoLaser ST is also suitable for the production of multilayer boards. The vacuum table even allows flexible materials and foils to be freely positioned and precisely held.

The latest generation of the powerful CAM and machine software, CircuitPro, is both data preparation and system control in one. CircuitPro is optimally designed for further processing of substrates prepared with an LPKF ProtoMat. Together with the integrated camera system, the software enables the exact positioning of the pre-drilled and cut-out PCBs.

Compact and economical, the first tabletop laser system requires only a power socket and compressed air. In operation, the LPKF ProtoLaser ST, which has a granite base, corresponds to laser class 1; no further protective measures are required.

LPKF ProtoLaser ST	
Max. material size and layout area (X/Y/Z)	229 mm x 305 mm x 7 mm (9" x 12" x 0.28")
Structuring speed	8.5 cm ² /min on FR4 18 µm Cu
Diameter of focused laser beam	22 µm (0.86 mil)
Minimum line/space	100 µm / 50 µm on FR4 18 µm Cu
Accuracy	10 µm (0.4 mil)
Repeatability	10 µm (0.4 mil)
Laser power	0 – 15 W
Laser pulse frequency	25 – 400 kHz
X/Y-drive, Z-drive	3-phase stepper motors
Dimensions (W x H x D), Weight	725 mm x 665 mm x 840 mm (28.55" x 26.2" x 33.1"), 115 kg (254 lbs)
Power supply	100 – 240 V, 50 – 60 Hz, 500 W
Compressed air supply	Pressure min. 6 bar; consumption 20l/min