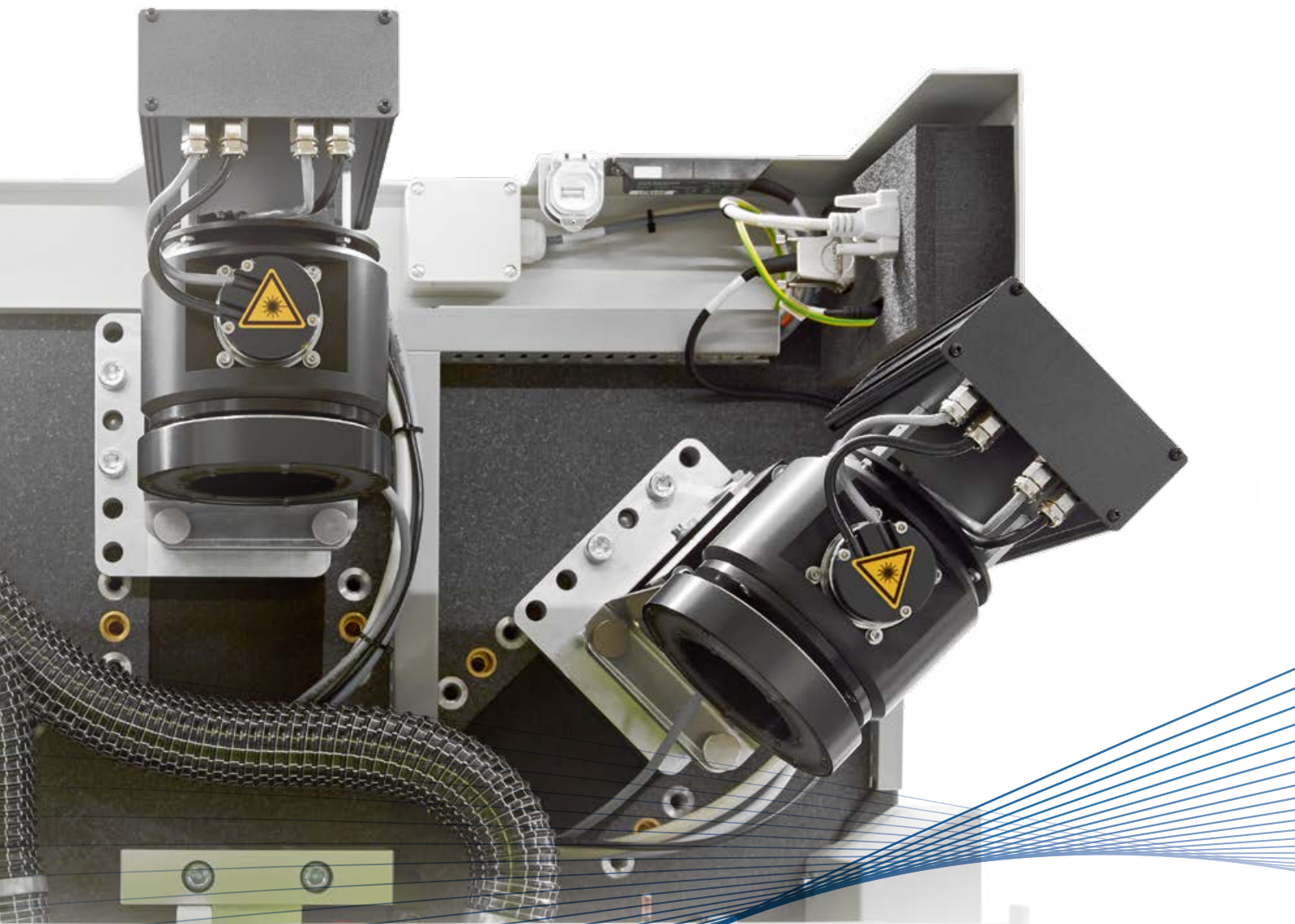


LPKF Laser Processing Unit II

Throughput and Precision Increased in the LDS Process



Further Development from an Already High Level

The LPKF laser processing units (PUs) demonstrate their proficiency in serial production on a daily basis. The development goals for the new generation were higher levels of performance and more precision in the LDS process, and they have certainly been achieved!

Modular System Structure

A substantial advantage of the LPKF Fusion3D line* is that the laser structurers can be equipped with up to three PUs. The PUs are the key to achieving production throughput and precision. With the second generation, LPKF is offering two new PUs:

PU II-100: The standard PU works with a laser focus width of 100 μm in diameter and can thus activate surfaces up to 25% more quickly than the predecessor (80 μm). The pitch is 300 μm (150 μm trace, 150 μm space); the output was increased to 25 watts.

PU II-50: For fine structures, such as MEMS, these PUs offer a pitch of 150 μm (75 μm trace, 75 μm space).

- Two focus diameters: 100 μm or 50 μm
- Vision system in the optical path
- Maintenance-free
- Higher throughput and more precision

Further Developed in a Targeted Fashion

Both PUs are enclosed so as to be dust-proof and are thus maintenance-free. Only the protective glass has to be cleaned at regular intervals. In addition, the mechanical stability of the new systems has been increased once again.

The PU II can be easily installed in any Fusion3D laser system. The CircuitPro 3D CAM software can control processes with mixed PCB assembly.

* except LPKF Fusion3D 6300

“PU II can help us improve cycle times and set up, especially in the prototyping phase. We ran the same project on PU II machine and the cycle time improved by 21 percent.”

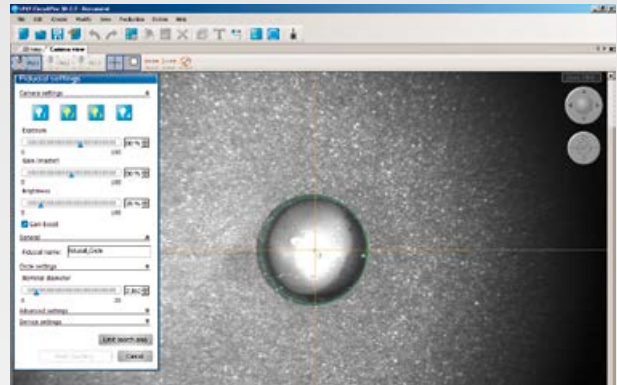
Pioneer Lv, Molex Interconnect (Shanghai) Co., Ltd.



Efficiency of the PUs in Comparison



Efficiency increased by up to 25%



Easy setting of fiducials

Higher Efficiency

The new generation of laser processing units offers increased performance. They simplify the set-up of production jobs and reduce the cycle time. The PUs are suitable for Laser Direct Structuring and also for drilling and other applications.

Vision System

A system with a view: the LDS-PUs can be optionally equipped with a camera system. The camera is in the optical path and can be focused in the Z axis. The camera can probe various predefined and individual fiducials at different depths in only 80 ms.

The comparison of nominal and actual positions opens up additional leeway when production has a high level of variance. The time for setting up serial components or prototypes is thus substantially reduced.



Worldwide Support for Laser Direct Structuring

Wherever they are in the world, users of LPKF systems can be supported from our application centers in Germany, the USA, Japan, Korea and China. At these centers, users have access to LPKF's extensive experience in laser material processing and the Laser Direct Structuring process. User training for technical employees and special consulting services complete the offer from the world market leader in laser systems for structuring three-dimensional molded interconnect devices. LPKF will gladly provide application reports and further information on request.

Technical Data:	PU II-100*	PU II-50*
Laser source		
Laser class	1	1
Nominal laser output power	25 W	18 W
Minimum PRR	10 kHz	10 kHz
Maximum PRR	200 kHz	200 kHz
Beam deflection		
Structuring Area (X x Y x Z)	200 mm x 200 mm x 80 mm (7.8" x 7.8" x 3.1")	100 mm x 100 mm x 40 mm (3.9" x 3.9" x 1.5")
Beam diameter	100 µm (4 mil)	50 µm (2 mil)
Scanning speed	4 m/s (157" per second)	2.5 m/s (98" per second)

* incl. Vision System

Worldwide (LPKF Headquarters)

LPKF Laser & Electronics AG Osteriede 7 30827 Garbsen Germany
Phone +49 (5131) 7095-0 info@lpkf.com www.lpkf.com

North / Central America

LPKF Laser & Electronics North America
Phone +1 (503) 454-4200 sales@lpkfusa.com www.lpkfusa.com

China

LPKF Tianjin Co., Ltd.
Phone +86 (22) 2378-5318 sales.china@lpkf.com www.lpkf.cn

Hong Kong

LPKF Laser & Electronics (Hong Kong) Ltd.
Phone +852-2545-4005 hongkong@lpkf.com www.lpkf.com

Japan

LPKF Laser & Electronics K.K. Japan
Phone +81 (0) 3 5439 5906 info.japan@lpkf.com jp.lpkf.com

South Korea

LPKF Laser & Electronics Korea Ltd.
Phone +82 (31) 689 3660 info.korea@lpkf.com www.lpkf.com

LPKF Laser & Electronics AG sells and markets products and provides support in more than 50 countries. Find your local representative at www.lpkf.com.



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