



FOCUSLIGHT
Never stop exploring

Photonics Solutions for

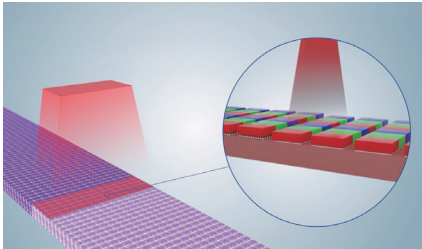
PAN-SEMICONDUCTOR PROCESSING

Mini & Micro LED Processes

Focuslight's Flux H series variable beam laser system is designed to offer efficient solutions specifically tailored to laser mass soldering and laser chip repair, addressing the major challenges that accompany the development of the Mini & Micro LED technology.



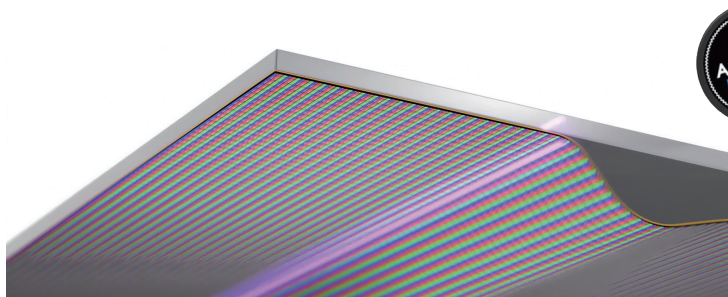
Specifications	For mass soldering	For chip repair
Beam Uniformity	> 97%	> 90%
Beam Length (both directions)	2 to 200 mm continuously adjustable	0.2 to 5 mm fixed
Power Output	4000 W, 976 nm	30 – 150 W, 976 nm



Flux H variable laser system for mini and micro LED processes

Solid-State Laser Lift-Off (LLO)

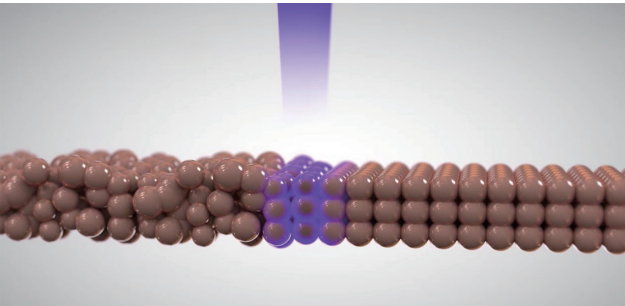
Focuslight's beam-shaping optical systems have been pivotal in OLED laser lift-off (LLO) for production of flexible displays used in mobile phones, smartwatches, tablets, and automotive applications like foldable and dashboard displays. Utilizing specialized micro-optics, Focuslight transforms multiple laser sources into precise profiles up to 1,000 mm long and under 50 µm wide, ensuring high efficiency and scalability for OLED production across all sizes and applications.



UV-L system for solid-state laser lift-off

Solid-State Laser Annealing (SLA)

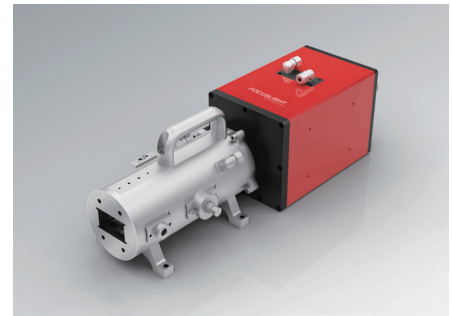
The next-gen LTPS (Low-Temperature Poly-Silicon) solid-state laser annealing is revolutionizing display manufacturing for high-resolution devices by enhancing silicon's electronic properties. Focuslight's advanced optical systems are essential to this innovation by delivering precise line beam shaping and uniform energy distribution.



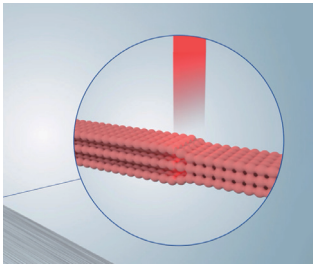
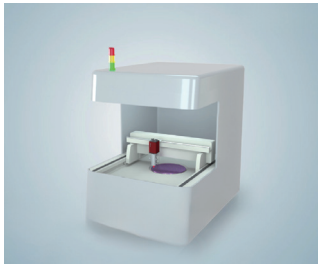
UV-L system for next-gen LTPS solid-state laser annealing

IC Wafer Annealing

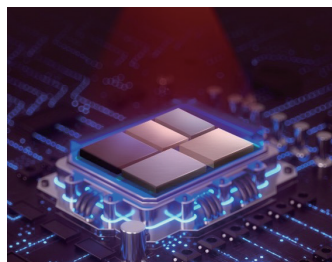
For the laser wafer annealing processes in the production of advanced logic chips at 28nm nodes and below, Focuslight offers diode laser systems engineered for its precision requirements. The laser system can rapidly heat the wafer surface to over 1000°C within 1 millisecond, and cool it rapidly to effectively minimize electrode defects, thus improving chip performance and yield.



DLight S laser wafer annealing system



Specifications	Value
Power Output	1500 W max.
Beam Profile (length direction)	Top-hat
Beam Size	12 mm * 70 µm
Beam Uniformity (length direction)	≥ 95%



Advanced Chip Packaging

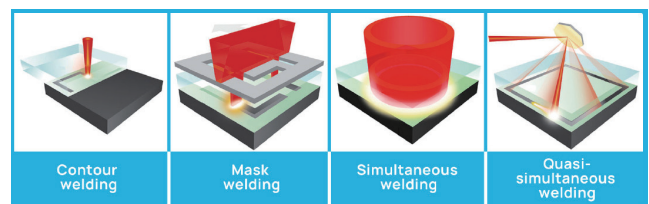
Focuslight's new Flux H series high-precision variable laser system offers highly efficient and reliable solutions for laser assisted bonding (LAB) in the advanced chip packaging processes. By focusing a laser beam onto the material interface, it instantaneously heats the surface to the required temperatures, inducing physical or chemical changes in the material, resulting in a strong bond on the interface.

Specifications	Value
Power Output	6000 W (CW, nominal)
Focal Depth	≥ ± 1 mm
Beam Length (both directions)	15 – 60 mm continuously adjustable, in top-hat profile
Beam Uniformity	≥ 95% (both x and y directions)

Flux H variable laser system for advanced chip packaging

Plastic Welding

Focuslight provides tailored "laser system + optical shaping" solutions, using advanced micro-optical beam shaping and homogenization technologies to empower laser plastic welding applications.



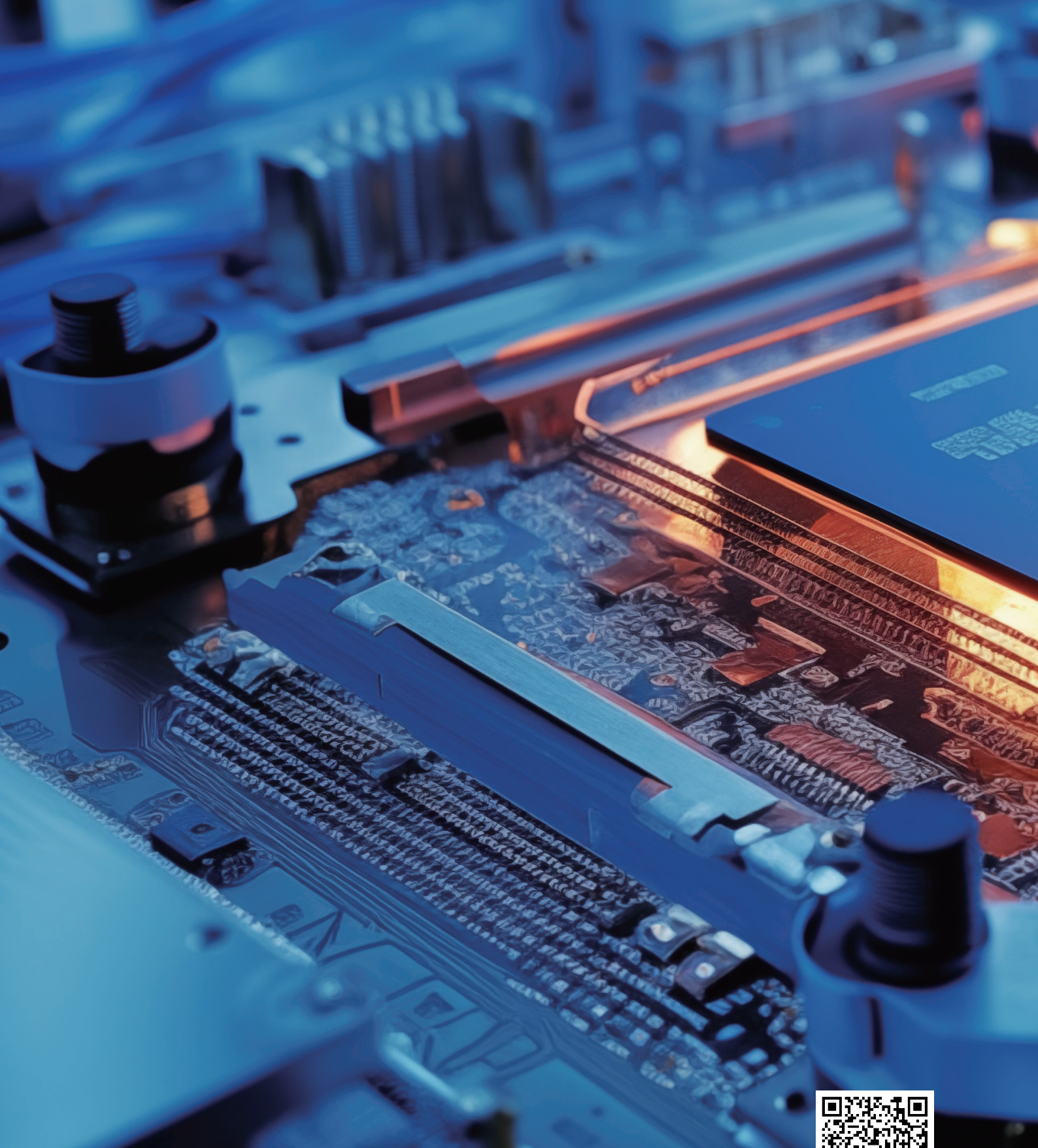
Activation C/E/S system

- Power output up to 500 W
- Wavelength 808/980 nm
- Turn-key laser system
- Closed-loop process control



Activation LPH series laser process heads

- Max. supported power 500 W
- Supported 790 – 1000 nm wavelength
- Round/square beam spot available



www.focuslight.com

COMPANY INTRODUCTION

Founded in 2007 and headquartered in Xi'an, China, Focuslight Technologies Inc. is a fast-growing public company (Shanghai: 688167) that specializes in developing and manufacturing high-power diode laser components and materials, laser optics, as well as photonics module and system solutions focusing on optical communication, automotive, pan-semiconductor, and medical and health applications. Focuslight has expanded its global footprint through strategic acquisitions including LIMO GmbH in 2017 and SUSS MicroOptics SA in 2024 (now as Focuslight Switzerland SA). With the acquisition of assets from ams OSRAM in 2024, Focuslight extends its business to be a global photonics foundry by providing global photonics industry process development and manufacturing service under the brand of Heptagon. Learn more at www.focuslight.com and www.hptg.com.

Focuslight Technologies Inc.

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