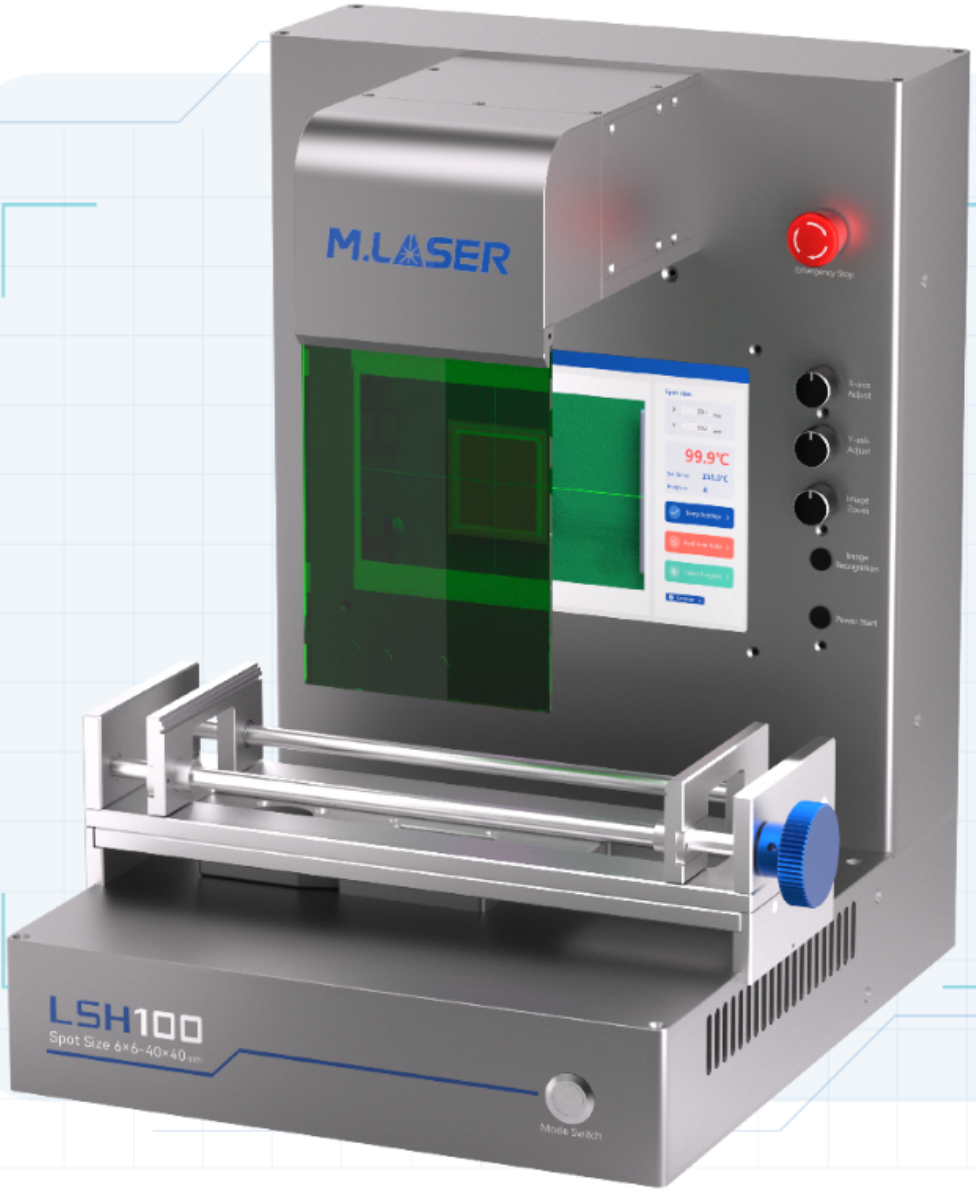
M.LASER

LSH / LASER SELECTIVE HEATING

LASER SELECTIVE HEATING WORKSTATION

Rectangular flat-top beam
Independent X/Y adjustment

LSH



Selective heating

Apply energy within the selected rectangular area.

Temperature control

Control the heating process with a temperature profile.

Versatile rework

Chip removal, component soldering, and localized reflow.

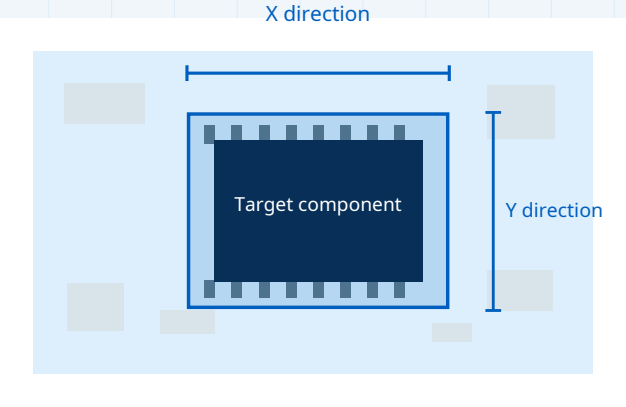
Precisely target the selected area for a range of heating tasks.

PRODUCT OVERVIEW / HOW IT WORKS

From chip removal to component soldering.

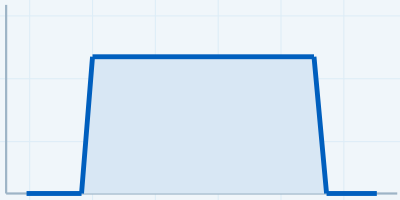
This desktop laser workstation uses selective heating for component soldering, chip removal, and localized reflow. Its rectangular flat-top beam, temperature control, and stable fixturing meet localized heating needs in R&D, repair, and small-batch rework.

Rectangular coverage with independent X/Y adjustment



The laser spot covers the entire selected rectangle.

Flat-top beam



Relatively uniform optical energy input across the effective illuminated area.

Conceptual optical profile. Temperature distribution requires separate measurement.

Complete localized heating at one workstation

01

Secure and preheat

The fixture supports the board securely. The worktable establishes the initial thermal conditions.

02

Set the heating area

Adjust X and Y independently. The system supports component size detection and spot matching.

03

Heat to a profile

Set the temperature and time. Monitor the target area during heating.

04

Finish and reuse

Complete soldering or desoldering. Save and recall process settings.

For professional electronics work

- **Electronics R&D and validation**
- **Board repair and component replacement**
- **Small-batch rework and repeat operations**

CORE FEATURES AND BENEFITS

Eight features for better control of local heating

From spot setup to process reuse, the workstation brings positioning, heating, observation, and repeat operations together at one desktop station.

01

Flat-top beam energy distribution

The rectangular flat-top spot covers the target area and delivers relatively uniform optical energy throughout the effective illuminated area, providing a stable basis for localized reflow, soldering, and desoldering.

02

Independent X/Y adjustment

Set the length and width of the rectangular spot separately. Adjust coverage to the component body, its leads, or local solder joints to match targets of different sizes and aspect ratios.

03

Chip size recognition and spot matching

The system detects chip size and automatically matches the spot. This cuts manual measurements and repeated adjustments, speeds up area setup, and improves consistency across similar jobs.

04

Temperature profile control

Temperature feedback and customizable profiles let you set temperature and time to suit the process and control heating during soldering, desoldering, and localized reflow.

05

Save and recall process settings

Save verified temperature profiles and process settings for similar tasks. Recall them to reduce repeated setup, reuse established procedures, and keep settings consistent.

06

Worktable preheating and stable fixturing

The preheated worktable provides the initial thermal conditions. The fixture supports the board securely and limits movement, making successive desoldering and repeat jobs easier.

07

Coaxial vision and on-screen controls

Coaxial vision shows the target area on the screen to help locate it and check the spot boundaries. Use the screen to adjust the area, set parameters, and monitor the process.

08

Laser protection design

A protective shield covers the work area to help reduce exposure to reflected and scattered laser light. Coaxial vision and on-screen monitoring reduce the need for close-up direct viewing.

TECHNICAL SPECIFICATIONS

Technical data and machine specifications

Key specifications to match your process requirements.

Category	Parameter	Specification
Laser & beam	Laser wavelength	915 ± 10 nm
	Rated laser power	LSH100 100 W LSH200 200 W
	Rectangular spot size	LSH100 6 × 6 to 40 × 40 mm LSH200 6 × 6 to 70 × 70 mm
	Spot uniformity	≥ 95%
	Power fluctuation	≤ 2%
Heating & preheating	Heating temperature	50 to 400 °C
	Temperature profiles	Customizable
	Preheating area	60 × 60 mm
	Preheating temperature	≤ 150 °C
Boards & fixtures	Supported board dimensions	30 × 30 to 300 × 300 mm
	Supported board thickness	≥ 2 mm
	Worktable dimensions	345 × 300 mm (L × W)
Vision & controls	Vision positioning	CCD vision positioning
	Spot size adjustment	Adaptive spot size adjustment
	Display	10.1 in, 1024 × 600 resolution
	Interface languages	Chinese and English
Electrical & environment	Input voltage	90 to 240 V AC
	Maximum power consumption	450 W
	Cooling method	Air cooling
	Operating temperature	10 to 35 °C
	Operating humidity	< 80%
Machine	Overall dimensions	345 × 400 × 470 mm (L × W × H)

More product information and application demos

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