

LC-2QS252

High-Speed, High-Precision CO2 Laser Drilling Machine
for HDI/Package PWB

2-Panel/2-Beam Laser Drilling Machine



LC-2QS252

High-Speed, High-Precision CO2 Laser Drilling Machine for HDI Package PWB

High-speed, high-precision and high-quality stable processing made possible by gathering together internally-produced core technologies

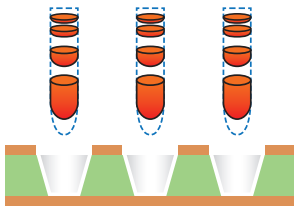
□ Long-term stability that supports volume production of next-generation PWB

- Improves stability of laser oscillator and RF power source designed by Via Mechanics
- Realizes high-speed, high-precision processing using the galvano system, CNC control system and software designed by Via Mechanics
- Capable of long-term stability through technologies that adapt to the usage environment

Able to realize stable production with high speed, precision and quality that covers a wide range of products from general-purpose built-up PWB to semiconductor interposer PWB.

□ Proprietary modulation function further upgraded

Further evolutions have been made in the modulation function that yields considerable effects in circumventing thermal impact upon inside-layer thin copper foil processing (3-layer sheet processing). The one-pulse oscillation of the laser is controlled with three-condition modulation settings.



Step Pulse + Modulation Drilling

Improved processing speed and high-quality processing without damaging bottom layers realized by reducing the number of shots

□ Supports high-precision drilling on next-generation high-density circuit boards

Drilling precision has been further improved based on mechanical structure analysis technologies, thermal analysis technologies and high-precision positional determination technologies accumulated through the development of laser drilling machines for PWB intended for use in interposers for high-end semiconductors.

Ave.+3 σ $\leq 6\mu\text{m}$ is realized with drilling on accuracy evaluation jigs.

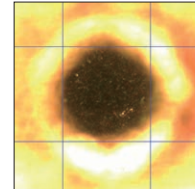
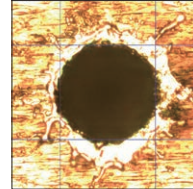
Primary specifications

Model	LC-2QS252
Max. drilling area	635 x 813mm 2-panels
XY positioning speed	50m/min
Number of beams	2
Laser power	640W
Galvano scan area	□ 70mm (OPTION : □ 30mm, □ 50mm)
Drilling accuracy	$\pm 0.008\text{mm}$ (Via pattern) Ave.+3 $\sigma \leq 6\mu\text{m}$ (glass master) *1
CNC	MARK-55L +

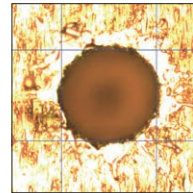
*1 OPTION

3 layer processing

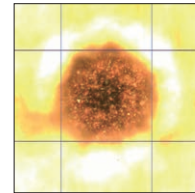
Front top view Front bottom view



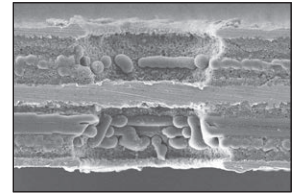
Back top view



Back bottom view



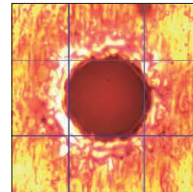
Cross section



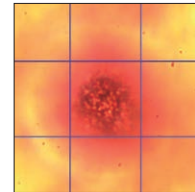
Direct drilling of non-surface treatment Cu

Hole diameter 25 μm

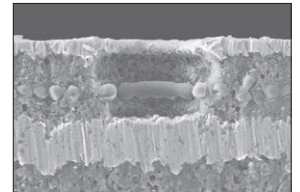
Top view



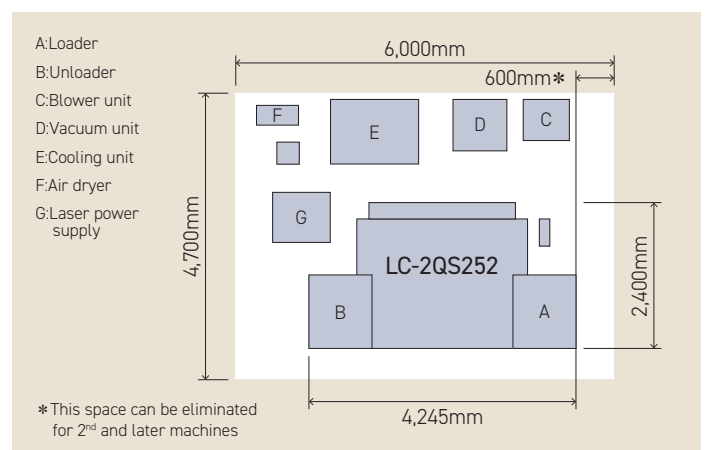
Bottom view



Cross section



Floor Plan



* Please note that the contents of this catalog are subject to change without notice.



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