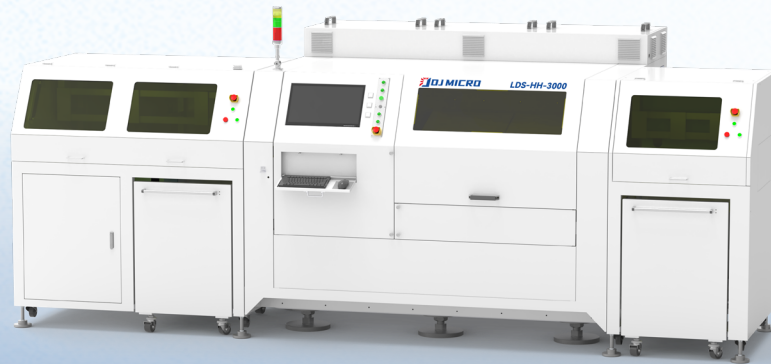
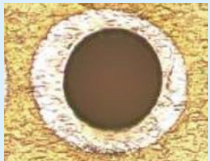
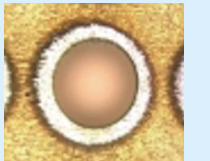
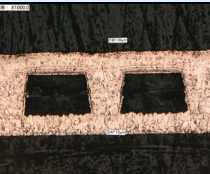
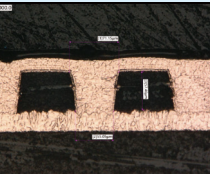


Ultrafast Laser Drilling Machine-Golden Gun-U

It is core equipment for processing blind and buried vias on high-frequency, high-speed M9 materials. Its innovative ultrafast laser control technology maximizes throughput. Utilizing cold ablation technology, the system eliminates pain points inherent to traditional processes while maintaining superior signal integrity and consistent mass-production reliability, establishing it as the ideal precision machining solution for M9 PCBs.



Product Highlights

Via Diameter (μm)	60	70
BVH		
	Top View	Top View
		
	Bottom View	Bottom View
		
	After Copper Plating	After Copper Plating

- ▶ **Deep Customization:** Precision-tuned for M9 material, fully compatible with ceramic-filled and glass-fiber-reinforced substrates.
- ▶ **Superior Hole Wall:** Carbonization-free cold ablation creates smooth, clean hole walls to boost reliability of subsequent copper plating.
- ▶ **Precision:** Processes $\geq 35\mu\text{m}$ microvias with uniform vertical profiles and accurate taper control.
- ▶ **Uncompromised Material Performance :** Minimal heat-affected zone retains M9's inherent low-loss dielectric properties.
- ▶ **Quality & Efficiency Combined:** Micron-level precision supports scalable mass production for steady, reliable output.
- ▶ **Wide Application:** Besides M9 material, it is also compatible with PI, LCP and other dielectric substrates, and suits FPC applications..
- ▶ **Process Synergy:** Seamlessly integrated into M9 PCB production workflows to ensure lifecycle-long product reliability..

Standard Equipment Specifications

Overall	MODEL	LDS-HH-3000
	Machine Size	5000 mm × 2220 mm ×1950mm
	Weight	9800kg
	Loading/Unloading	STS
	Energy Consumption	7KW
Stage	Main Stage type	Cross-axis brushless linear motor
	Maximum Stage Speed	1000mm/s
	Repeatability	±1μm
	Panel Quantity	2
	Panel Size	650mm x 550mm
	Mounting Method	Vacuum Adsorption
	Secondary Stage	Cross-axis galvanometer
	Tertiary Stage	HSC System
	Motion Mode	Stitching
	Z-stage range	>30mm
	Z stage max speed	>10mm/s
Laser	Type	UV Laser
	Stability	< 2.5%+50mW
CCD Vision	Coarse camera FOV	~ 8.4mm x 7mm
	Fine camera FOV	~ 2mm x 1.7mm
	Illumination	LED ring light + Coaxial light
Software	System	Windows 10
	Operation software	JPT Self-developed software
	File format	DXF, DWG, DRL, GBR, BAS and other common CAD formats
Performance	Accuracy	±20μm over full panel
	Holes Diameter	>35μm
	Hole circularity	>90%
	Hole taper	>80% @ 70μm
	High throughput	>400holes/s

* Support customization