

SG-3624 Laser Stencil Cutting System

HIGH PRECISION LASER STENCIL CUTTING SYSTEM . . .

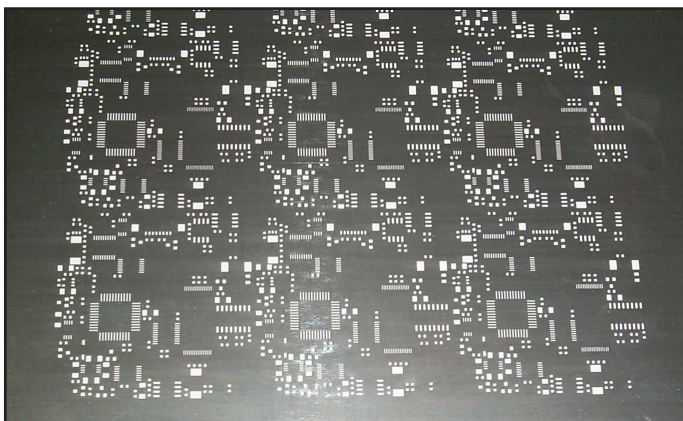
The SG-3624 is an open frame laser micro-machining center ideally suited for stencil cutting and advanced high frequency micro-machining. The laser output features exceptional energy stability in a true TEM₀₀ output which lends itself for machining PCB stencils, medical stents, diamond wafers, ceramics and precision metal components. The motion system features split-axis X/Y gantry which offers greater precision and rigidity than a flying optics machine. This results in machine tool-like performance, high throughput speeds and easy service/maintenance. Both X and Y axes are driven with pre-loaded lead screws and ball slides. The system features a gas-assist precision nozzle heat treated to withstand high pressure/high cycle operation. The system also features an enclosed beam path up to the nozzle output.



Optional hold down fixture shown in operation cutting a 24" x 24" PCB stencil.

HIGH PERFORMANCE LASER AND CONTROLS. . .

Both X and Y axes are driven with closed-loop servo motors with digital controls. The system is setup to run standard g-code files and is expandable when using 3rd party design/CAD software. A powerful and yet intuitive Windows operator interface is used for setup operation and laser control. The laser and service specifications are as listed below:



Ultra-precise stencil cut at high speeds with no charring and straight/clean edges. The SG-3624 is ideal for any advanced micro-machining application.

LASER

Mode	TEM ₀₀
Wavelength (nm)	1064
Nominal average power @2000Hz (W)	12
Pulse frequency (Hz)	800-2000
Pulse width (μsec)	10 to 40
Pulse to pulse stability (RMS)	2%
M ²	1.2
Beam divergence full angle 1/e ² (mrad)	2.5
Pointing stability (μrad)	<100
Polarisation	random
Max. pulse energy @2000Hz (mJ)	6
Max. peak power @2000Hz (kW)	2.5

SERVICES

Electrical power consumption	220/240 VAC 50/60Hz Single phase 7KVA
Cooling water consumption	10l/min max. (>2bar, <20°C)
Flashlamp lifetime	>800 million shots