

## LPS Series Laser System



### LPS Series Precision Laser Machines

- For cutting, hole drilling, patterning, and resistor trimming applications
- Produce feature size down to 5 microns
- Any where from R&D to high volume production capable

### TYPICAL APPLICATIONS

Cut, Drill, Pattern, or Scribe any Thin Material

Silicon Wafer Coring and Machining

Precision Machining for Medical Applications

Ceramic Cutting, Drilling, and Scribing

Hybrid Resistor Trimming

Ultrafast Laser for no Heat Affected Zone

Laser Options Include: YAG, Fiber, and Diode. Wavelength Options: 1064 IR, 532 Green, & 355 UV.  
Specializing in everything from R&D to full scale production and anything in between.

## LPS and SPS Series Laser System Tools

**LPS and SPS Systems** are multi-purpose laser micromachining systems optimized for one or more tasks as required by the user. We customize to specific applications such as: patterning displays and cutting/drilling/scribing any thin material including metals, silicon, ceramics and plastics. Depending upon choice of laser, cutting edge (kerf) is 10-100um.

Laser machines are supplied with an XY stage (Model LPS) for moving your part or with a galvanometer scanner (Model SPS) to move the beam. Choices of lasers from one to 400w are supplied, IR, green or UV. Software is advanced GUI type and is written in-house. Typical users are C-Touch display, semiconductor and other electronics companies, medical device, and R&D labs.

## Precision Processing—Prototype to Production

### SPECIFICATIONS\*

- **Safety:** Class I rated for eye safe operation without goggles
- **Lasers:** Solid-state IR or frequency multiplied green or UV or CO2 gas lasers
- **Kerfs:** Depending on choice of laser, 10-100um (spot size)
- **Wavelengths:** 1064nm IR, 355nm UV, 532nm green or 10,600nm CO2
- **Motion Device:** X/Y stage to move the part. Or a galvo to move the beam over a stationary part.
- **Viewing:** Magnified through the lens with video camera and 20" monitor, for XY only
- **Targeting:** Electronic crosshairs visible on the monitor, XY only
- **Illumination:** Uniform in-line illuminator, XY only
- **Computer Control:** Beam expander for varying spot size and Z-focus
- **Part Sizes:** X/Y: up to 300mm x 300mm (12" x 12") parts, larger on special order.  
Galvo: 450mm x 450mm (18" x 18") scan field or smaller
- **Resolution:** X/Y: 0.5um - all field sizes. Galvo: 10um with 4" field size
- **Accuracy:** X/Y: +/-20um (servo motors), +/-10um (linear motors) with 12" travel.  
Galvo: +/- 50um with 18" field size, better accuracy on special order
- **Programming:** PC with optional CAD/CAM software to convert dxf to laser machining code
- **Frame:** Extruded aluminum frame for light weight and granite base for stability
- **Coolant:** Depending on choice of laser—water or air
- **Power:** Typically 220VAC, 50/60Hz, single-phase, 20a
- **Weight:** 2200 lbs in shipping crate
- **Options:** Larger travel for bigger parts, Q-switched, diode, fiber or CO2 lasers, machine vision, linear motors, manual or automatic optical alignment, and parts handling fixtures.

\*Specifications are subject to modification and improvement.



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