

# Samurai UV

## Class I Marking System

### FEATURES

- ~ Up to 3 W Average Power
- ~ Up to 4 KW Peak Power
- ~ High Precision
- ~ Powerful, Easy-to-use Software
- ~ Import Text and Graphics From Your Favorite Programs
- ~ Automation-Ready Industrial Design
- ~ Safe, Class I Enclosure
- ~ Customizable Work Areas and Spot Sizes



The Samurai UV Marker is a fully integrated Class I benchtop UV marking system. Taking advantage of the photon energy of the 355 nm wavelength, the system is capable of achieving 7  $\mu$ m spot sizes and work spaces in excess of 300 x 300 mm. With the intuitive control software, you can go from design to marking within minutes of system start-up. The low-maintenance DPSS UV Laser offers years of trouble-free marking.

The Class I safety enclosure is designed to meet strict FDA safety guidelines while being easy to use and non-obtrusive. A large front door allows convenient access to the entire work area. Safety shielding protects the user from powerful UV beams, but allows 360 degree viewing of the work space.

The Class I Samurai UV Marker is designed to be as versatile as it is powerful. The system can operate independently on a benchtop or be fully integrated into your automated production process using industrial level I/O, software APIs, serial and Ethernet communication, PLCs and much more.



Silicon Wafer Marking

### APPLICATIONS

- \* Laser Marking
- \* Solar Cell Processing
- \* Thick/Thin Film Laser Trimming
- \* ITO Removal
- \* Sapphire Scribing
- \* Micromachining
- \* Direct Write/Repair
- \* Micro-via Hole Drilling
- \* Wafer processing
- \* Polyimide Cutting & Drilling
- \* Photo Bleaching

Find more application data on the web at [www.DPSS-Lasers.com](http://www.DPSS-Lasers.com)

# SPECIFICATIONS

## LASER PERFORMANCE

Wavelength	354.7 nm
Average Power	1 - 3 W
Energy per Pulse	< 100 $\mu$ J
Mode (M <sup>2</sup> )	TEM <sub>00</sub> (M <sup>2</sup> < 1.3)
Beam Diameter (1/e <sup>2</sup> )	See Chart
Pulse to Pulse Stability (30 - 100 kHz)	< 15%
Power Stability (8 hrs. at const. temp.)	< 5%
Ellipticity	< 10%
Astigmatism	< 0.3

## MARKING PERFORMANCE

Marking Accuracy	< 1.5 mrad
Marking Repeatability	< 22 $\mu$ rad

## ELECTRICAL

Input Voltage	90 - 240 VAC
Power Consumption (max.)	900 W
Ambient Temp. (non-condensing)	10 - 35° C

## PHYSICAL

System Dim (LWH)	872 x 807 x 854 mm
Marking Chamber Dim (LWH)	737 x 737 x 610 mm
System Weight	91 kg
Cooling System Dim. (LWH)	287 x 224 x 389 mm
Cooling System Weight (dry)	9 kg

Full system consists of laser head, laser controller, routing optics, galvo, cooling system, computer, marking software and all necessary cables.

Spot Size	Field Size	f-Theta Lens
7 $\mu$ m	16 x 16 mm	f-56 mm
20 $\mu$ m	160 x 160 mm	f-250 mm
25 $\mu$ m	205 x 205 mm	f-330 mm
30 $\mu$ m	80 x 80 mm	NA
50 $\mu$ m	170 x 170 mm	NA

\*Other Models Available Upon Request. Specifications subject to change without notice.

