

# LAMBDA SX

## High-Power Excimer Lasers

The LAMBDA SX industrial excimer laser series provides unique high UV power to the production floor. It delivers high and stable pulse energy, and also features a number of innovative technologies for unsurpassed performance and reliability.

LAMBDA SX lasers are perfectly suited for applications ranging from micro structuring, advanced semiconductor packaging, manufacturing of High Temperature Superconductors by Pulsed Laser Deposition (PLD), Laser Lift-Off (LLO) to high power UV LIDAR. The E-Series is ideal for Excimer Laser Annealing (ELA).

### FEATURES & BENEFITS

- Perfect energy stability to ensure production yield
- Pulse on Demand to enable cost effective Laser Lift-Off
- Laser data acquisition to allow advanced process control
- Sealed and purged beam path for stable long term operation
- Ethernet interface for control and fast data acquisition

### APPLICATIONS

- Microstructuring and Drilling
- Pulsed Laser Deposition
- Surface Treatment

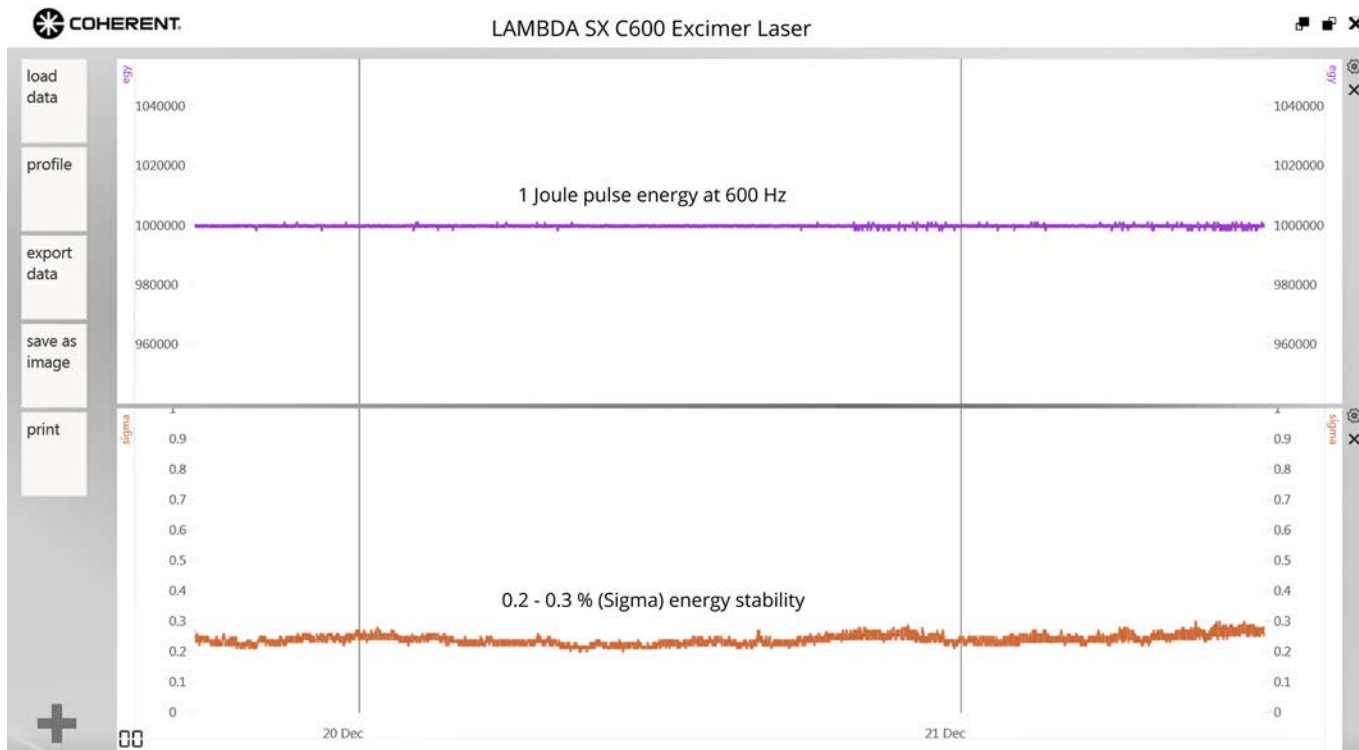


SPECIFICATIONS	LAMBDA SX E500	LAMBDA SX C600
Wavelength (nm)	308	308
Maximum Stabilized Pulse Energy (mj)	1000	1000
Maximum Stabilized Average Power (W)	500	600
Maximum Repetition Rate (Hz)	500	600
Energy Stability (sigma, %)	≤0.45	≤1
Pulse Duration (FWHM) (ns)	24 ±4	24 ±4
Beam Dimensions <sup>2</sup> (FWHM, V x H, mm <sup>2</sup> )	35 ±4 x 14.5 ±3	35 ±4 x 14.5 ±3
Beam Divergence (FWHM, V x H, mrad <sup>2</sup> )	≤4.5 x 1	≤4.5 x 1.5
Dynamic Gas Lifetime (at max. stabilized energy) (mio. pulses)	60	100
WEIGHT/UTILITIES/DIMENSIONS		
Weight	2200 kg/4850 lbs.	2200 kg/4850 lbs.
Cooling	Water, 3 to 70 l/min. (0.8 to 18.5 gal./min.), 12 to 15°C	Water, 3 to 70 l/min. (0.8 to 18.5 gal./min.), 12 to 15°C
Electrical	40 kVA, 3-phase, 400 VAC, 50/60 Hz	40 kVA, 3-phase, 400 VAC, 50/60 Hz
Dimensions (L x W x H)	2800 x 850 x 2083 mm (110.2 x 33.3 x 82 in.)	2800 x 850 x 2083 mm (110.2 x 33.3 x 82 in.)

1 All specifications are subject to change without prior notice in order to provide the best product possible.  
 2 Beam dimensions measured at 1.0m from beam exit.  
 3 ±20 mm (0.8 in.).

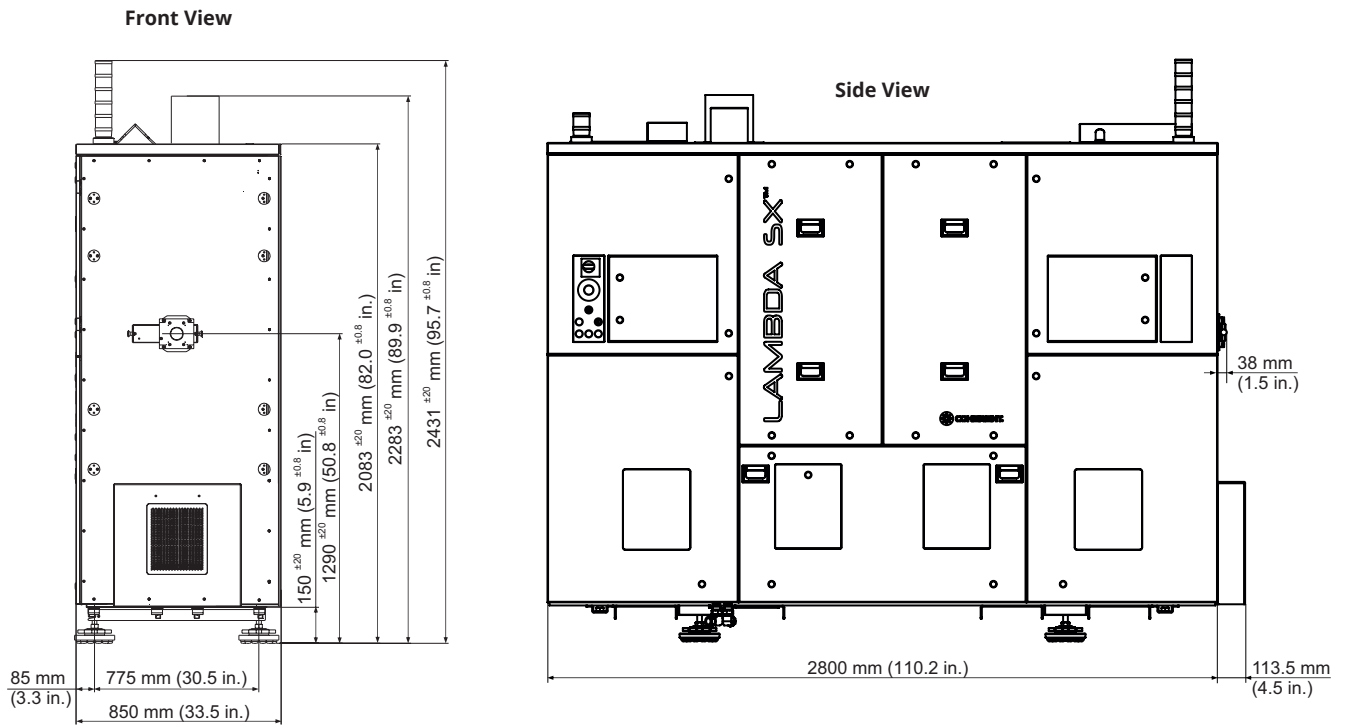
### ExiScope Data Analysis

System energy, sum sigma, individual sigma, and much more parameter can be analyzed and displayed with the ExiScope software.



## MECHANICAL SPECIFICATIONS

### LAMBDA SX




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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all LAMBDA SX Lasers. For full details of this warranty coverage, please refer to the Service section at [www.Coherent.com](http://www.Coherent.com) or contact your local Sales or Service Representative. MC-009-18-0M0618 Copyright ©2018 Coherent, Inc.

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VISIBLE AND INVISIBLE LASER RADIATION.  
 AVOID EYE OR SKIN EXPOSURE TO  
 DIRECT OR SCATTERED RADIATION.  
 CLASS IV LASER RADIATION PRODUCT  
 PER EN/IEC 60825-1 (2014)

MAX. OUTPUT POWER: 900 W  
 MAX. OUTPUT ENERGY: 1.5 J/pulse  
 PULSE DURATION: 10 to 50 ns  
 WAVELENGTH: 248 to 308 nm