

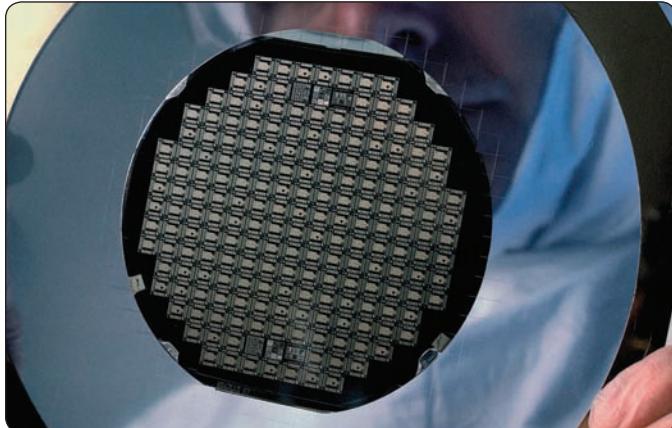
LAMBDA SX Series

High Power/Very High Power Excimer Lasers

Modular Excimer Laser Beam Solutions

The LAMBDA SX industrial excimer laser series provides unique high UV power to the production floor. It is designed to deliver 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 specially designed for Excimer Laser Annealing (ELA).



Superior Reliability & Performance

LAMBDA SX Features:

- **Highest UV Power**
- **Lowest costs per Watt UV**
- **Perfect energy stability**
- **Burst operation**
- **Laser data acquisition**
- **Sealed and purged beam path**
- **Ethernet interface**

LAMBDA SX Options:

- **Pulse Shape Analysis**
- **ExiScope Laser Data Analysis**
- **Line Voltage Transformer**

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System Specifications ¹	LAMBDA SX K300	LAMBDA SX C300	LAMBDA SX C600
Wavelength (nm)	248	308	308
Maximum Stabilized Pulse Energy (mJ)	1000	1000	1000
Maximum Stabilized Average Power (W)	300	300	600
Maximum Repetition Rate (Hz)	300	300	600
Energy Stability (sigma, %)	≤1.2	≤1	≤1
Pulse Duration (FWHM)(ns)	32 ±5	29 ±5	24 ±4
Beam Dimensions ² (FWHM, V x H, mm ²)	34 ±3.5 × 14 ±2	35 ±3.5 × 13 ±2	35 ±4 × 14.5 ±3
Beam Divergence (FWHM, V x H, mrad ²)	≤4.5 × 1.5	≤4.5 × 1.5	≤4.5 × 1.5
Dynamic Gas Lifetime (at max. stabilized energy)(mio. pulses)	40	60	100

Weight/Utilities/Dimensions

Weight	2000 kg/4409 lbs.	2100 kg/4630 lbs.	2200 kg/4850 lbs.
Cooling	Water, 1 to 25 l/min. (0.3 to 6.6 gal./min.), 10 to 15°C	Water, 3 to 28 l/min. (0.8 to 7.4 gal./min.), 10 to 15°C	Water, 3 to 70 l/min. (0.8 to 18.5 gal./min.), 12 to 15°C
Electrical	19 kVA, 3-phase, 400 VAC, 50/60 Hz	22 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 ³ mm (110.2 x 33.3 x 82 in.)	2800 x 850 x 2083 ³ mm (110.2 x 33.3 x 82 in.)	2800 x 850 x 2083 ³ mm (110.2 x 33.3 x 82 in.)

System Specifications¹

	LAMBDA SX E300	LAMBDA SX E500
Wavelength (nm)	308	308
Maximum Stabilized Pulse Energy (mJ)	1050	1000
Maximum Stabilized Average Power (W)	315	500
Maximum Repetition Rate (Hz)	300	500
Energy Stability (sigma, %)	≤0.8	≤0.45
Pulse Duration (FWHM)(ns)	29 ±5	24 ±4
Beam Dimensions ² (FWHM, V x H, mm ²)	35 ±3.5 × 13 ±2	35 ±4 × 14.5 ±3
Beam Divergence (FWHM, V x H, mrad ²)	≤4.5 × 1.5	≤4.5 × 1
Dynamic Gas Lifetime (at max. stabilized energy) (mio. pulses)	60	60

Weight/Utilities/Dimensions

Weight	2100 kg/4630 lbs.	2200 kg/4850 lbs.
Cooling	Water, 3 to 28 l/min. (0.8 to 7.4 gal./min.), 10 to 15°C	Water, 3 to 70 l/min. (0.8 to 18.5 gal./min.), 10 to 15°C
Electrical	22 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 ³ mm (110.2 x 33.3 x 82 in.)	2800 x 850 x 2083 ³ 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.

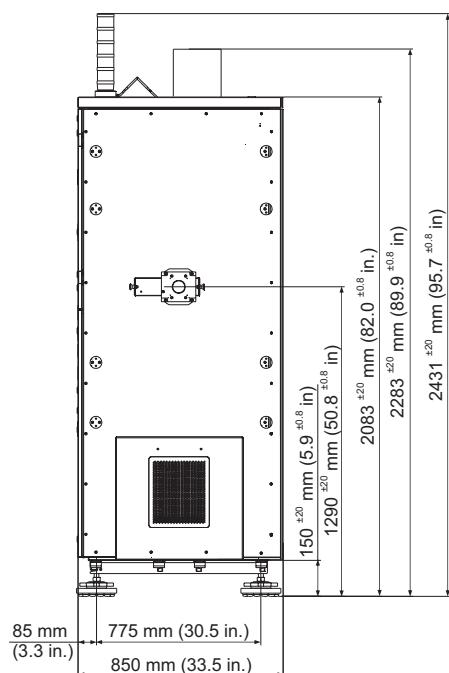
³ ±20 mm (0.8 in.).

LAMBDA SX Series

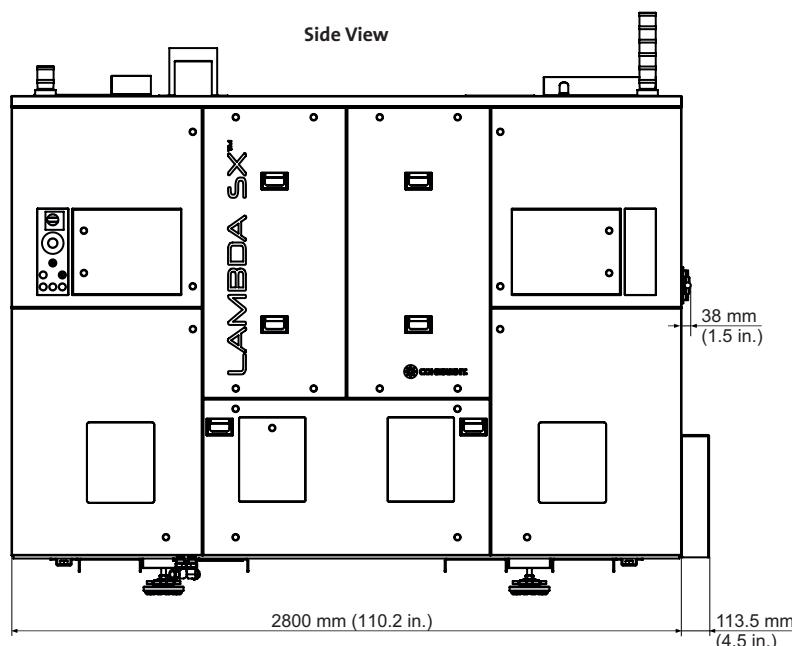
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Mechanical Specifications

Front View



Side View



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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 or contact your local Sales or Service Representative.

