

Libra Series

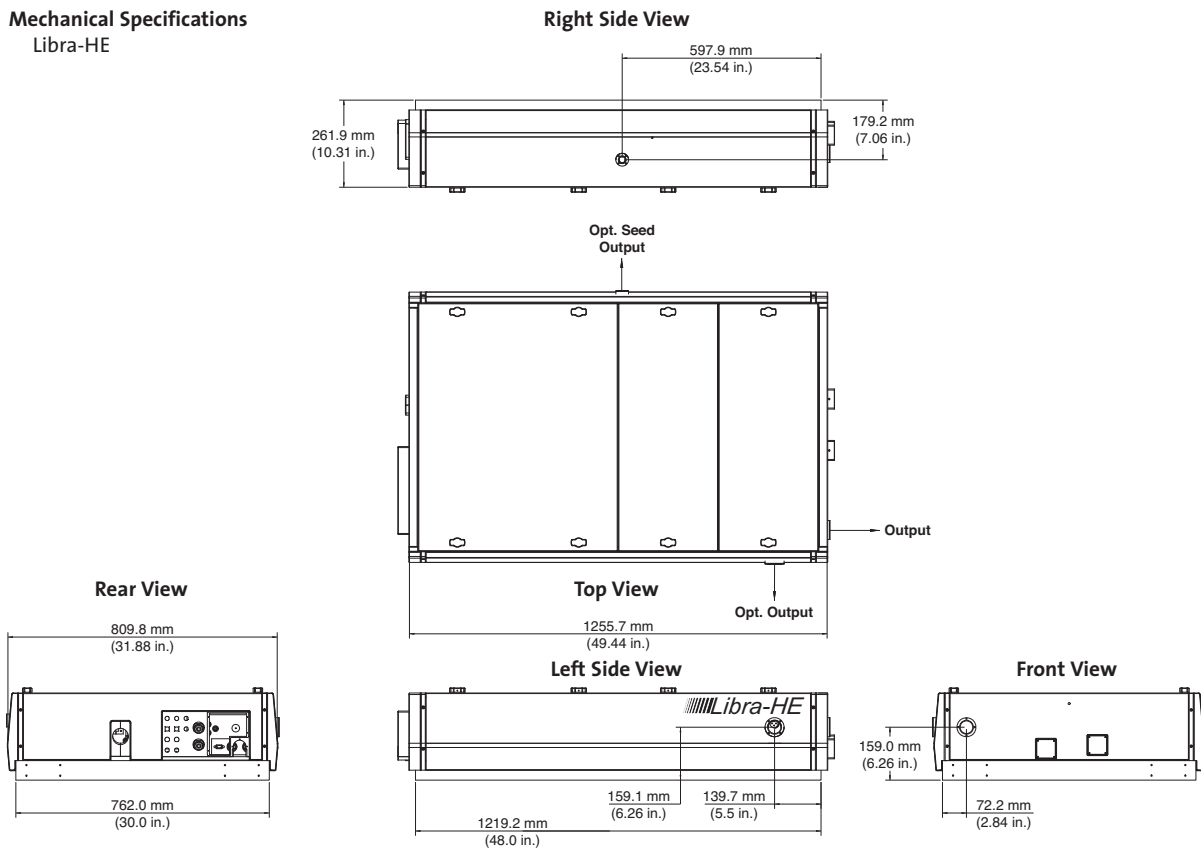
One-Box, High-Energy, Ti:Sapphire, Regenerative Amplifiers



Features

- One-box, compact, computer-controlled system contains integrated Vitesse seed laser, Evolution pump laser, regenerative amplifier, stretcher and compressor
- E-2 Engine, high performing, highly reliable, regenerative amplifier module provides the highest energy and efficiency with improved beam quality ($M^2 < 1.3$)
- Thermally stabilized amplifier platform
- Pulse energy to >3.5 mJ at 800 nm
- <50 fs and <100 fs pulse width available
- Stability to $<0.5\%$ rms
- 1 and 5 kHz standard

Mechanical Specifications Libra-HE



Superior Reliability & Performance

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One-Box, High-Energy, Ti:Sapphire, Regenerative Amplifiers

System Specifications

	Libra-S	Libra-F-HE	Libra-USP-HE
Center Wavelength (nm)(nominal)		800	
Repetition Rate ¹ (kHz)		1 or 5	
Pulse Duration ² (fs)(FWHM)	<100	<100	<50
Energy-per-Pulse (mJ)	>1.0 at 1 kHz >0.3 at 5 kHz	>3.5 at 1 kHz >0.7 at 5 kHz	>3.5 at 1 kHz >0.7 at 5 kHz
Contrast Ratio ³		>1000:1 pre-pulse >100:1 post-pulse	
Energy Stability ⁴ (rms)(8 hrs.)	<1.0%		<0.5%
Beam Diameter (mm)(nominal)	<7.0		<8.5
Spatial Mode (TEM ₀₀)	M ² < 1.5		M ² < 1.3
Polarization		linear, horizontal	
Pump Laser	Evolution-15		Evolution-30
Dimensions (L x W x H)	1117.6 x 617.5 x 264.2 mm (44.0 x 24.3 x 10.4 in.)		1255.7 x 809.8 x 261.9 mm (49.4 x 31.9 x 10.3 in.)

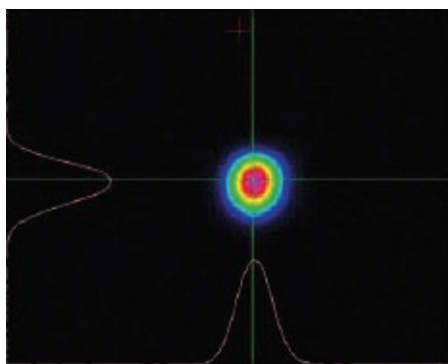
¹ Repetition rate must be specified when ordered and will be optimized prior to shipment

² A gaussian pulse shape de-convolution (0.7) is used to determine the pulse width from an autocorrelator signal measured by a Coherent SSA (Single-Shot Autocorrelator)

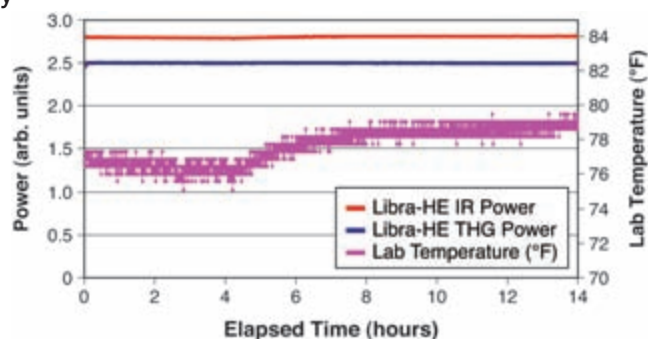
³ Contrast ratio is defined as the ratio between the peak intensity of the output pulse to the peak intensity of any other pulse that occurs greater than 1ns before or after the output pulse.

⁴ Under stable environmental conditions, after system warm-up

Libra-HE Far-Field Beam Quality



Libra-HE Power Stability >14 hours, 800 and 266 nm simultaneously



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 Libra Series amplifiers. 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.



www.Coherent.com

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