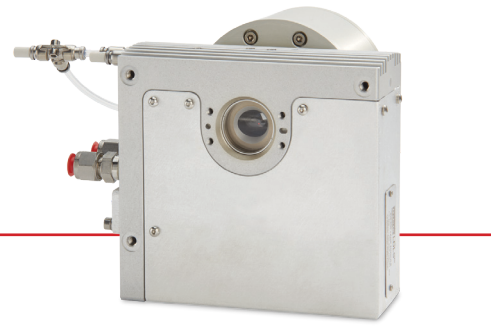


EQ-400 LDLS®

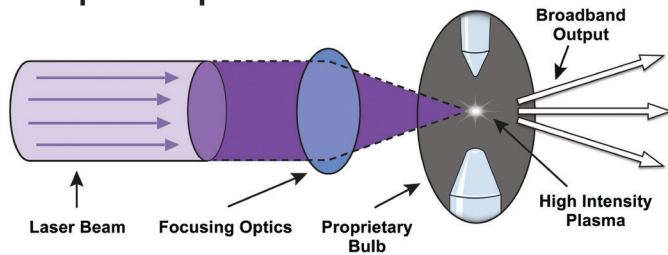
Laser-Driven Light Source



Overview

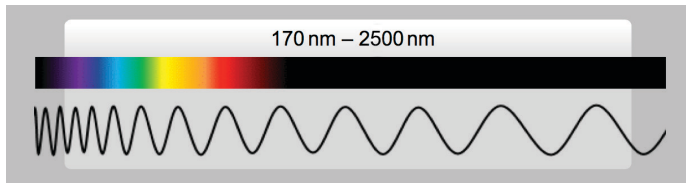
Energetiq's EQ-400 LDLS is a high brightness source with a broad wavelength range from UV to Visible and into the NIR region. The unique principle of operation provides extremely bright, spatially and spectrally stable broadband radiation from 170 nm – 2500 nm with a lifetime greater than 10,000 hours.

Principle of Operation



LDLS technology utilizes a laser to create an extremely small, high brightness plasma with a broad spectral range.

Wavelength Range



Properties

Wavelength Range	170 nm – 2500 nm
Plasma Size (FWHM) ¹	370 μm X 800 μm
Numerical Aperture	0.5 NA
Bulb Lifetime	10,000 hours
Distance of Plasma from Output Window ²	19 mm
Laser Class	Class 4 (IEC 60825-1: 2014)

¹ Average plasma size

² Approximate distance measured with quartz output window

Typical Performance

Spectral Radiance at 500 nm	~110 mW/mm ² .sr.nm
Broadband Optical Power ³	~15 W

³ Measured with thermopile

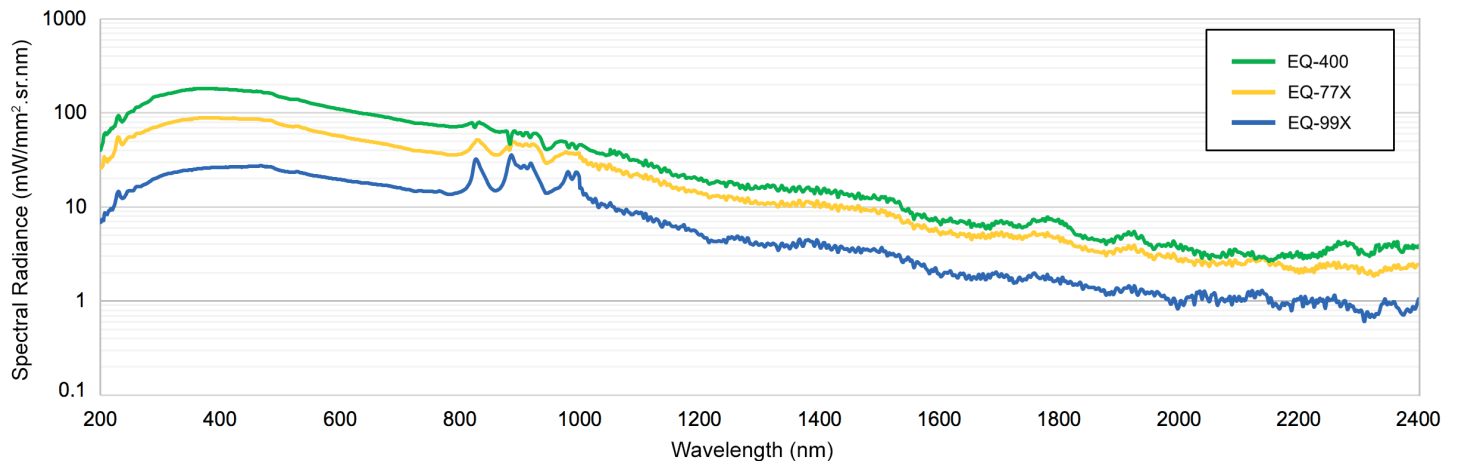
Models

LDLS are sold as systems. Each EQ-400 system includes a lamp head, power supply controller, and necessary cables.

Part Number	Description	Wavelength Range
EQ-400-RH-QZ-S	EQ-400 with Quartz Window	170 nm – 2500 nm
EQ-400-LH-BK7-S	EQ-400 with BK7 Window	350 nm – 2500 nm

Spectral Radiance Comparison

Average radiance, measured with quartz output windows. For reference only.



Consumable Components

The recommended service interval is 10,000 hours.

Part Number	Description	Wavelength Range
EQ-400-BKIT-R	Bulb Replacement Kit (Not Field Replaceable)	170 nm – 2500 nm
EQ-400-RW-QTZ	EQ-400 Replacement Window, Quartz (Field Replaceable)	170 nm – 2500 nm
EQ-400-RW-BK7	EQ-400 Replacement Window, BK7 (Field Replaceable)	350 nm – 2500 nm

Optional Accessories

Part Number	Description
EQ-400-CHILLER-KIT	Chiller with Tubing and Filter Kit for EQ-400
EQ-400-EWP	12 Month Extended Warranty for EQ-400

Facility Requirements

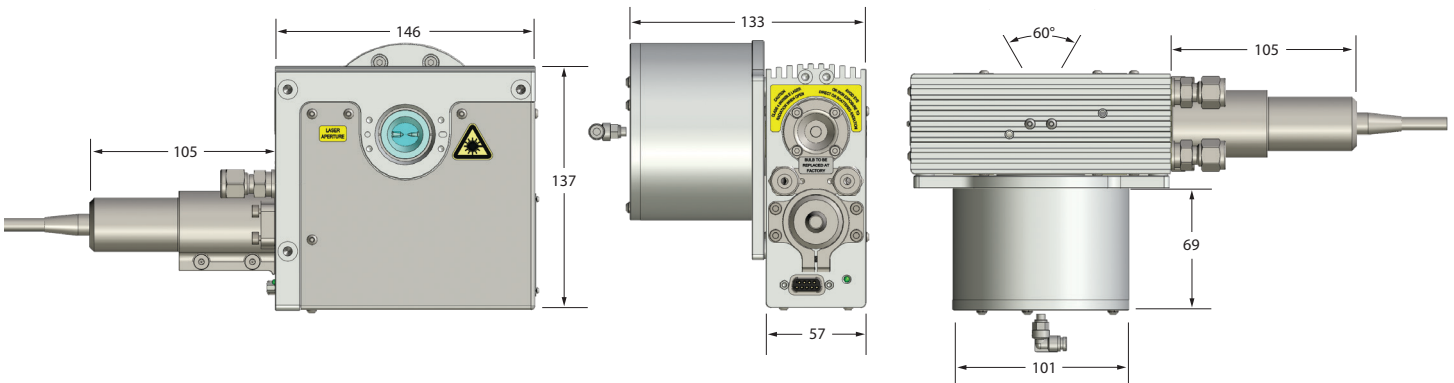
Electrical	200 – 240 V~, 50/60 Hz, 7A, 1700 W max.
Cooling (Lamp Head)	≥ 1 liter/minute, 18 – 30 °C
Cooling (Controller)	3 – 4 liters/minute, 18 – 24 °C
Nitrogen Purge	Required. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2
Ambient Temperature	15-35°C

Physical Specifications

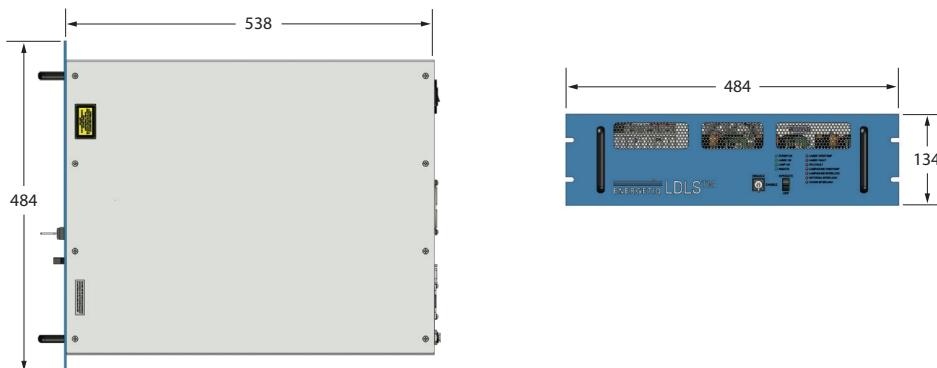
Lamp Head Dimensions (H x W x D)	137 x 146 x 133 mm
Lamp Head Weight	2.7 kg
Controller Dimensions (H x W x D)	134 x 484 x 538 mm
Controller Weight	18.8 kg

Lamp Head Dimensions (Unit: mm)

Drawings are for reference only and are not to scale. STEP-File available. Power brick and laser fiber are not shown.



Controller Dimensions (Unit: mm)



www.energetiq.com/patents



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Specifications are typical and subject to change without notice.
EQ400 LDLS—02/2023

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