

EQ-99X LDLS®

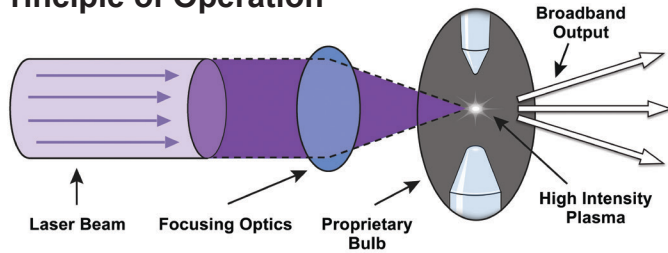
Laser-Driven Light Source



Overview

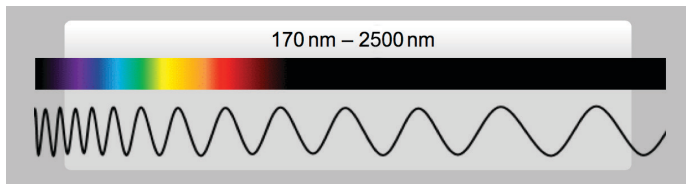
Energetiq's EQ-99X LDLS is a high brightness source with a broad wavelength range from UV to Visible and into the NIR region. The unique principle of operation provides extremely bright, spatially and spectrally stable broadband radiation from 170 nm – 2500 nm with a lifetime greater than 10,000 hours.

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	100 μm X 180 μm
Numerical Aperture	0.47 NA
Bulb Lifetime	10,000 hours
Distance of Plasma from Output Window ²	20.1 mm
Laser Class	Class 1 (IEC 60825-1: 2014)

¹ Average plasma size

² Approximate distance measured with quartz output window

Typical Performance

Spectral Radiance at 500 nm	~25 mW/mm ² .sr.nm
Broadband Optical Power ³	~0.75 W

³ Measured with thermopile

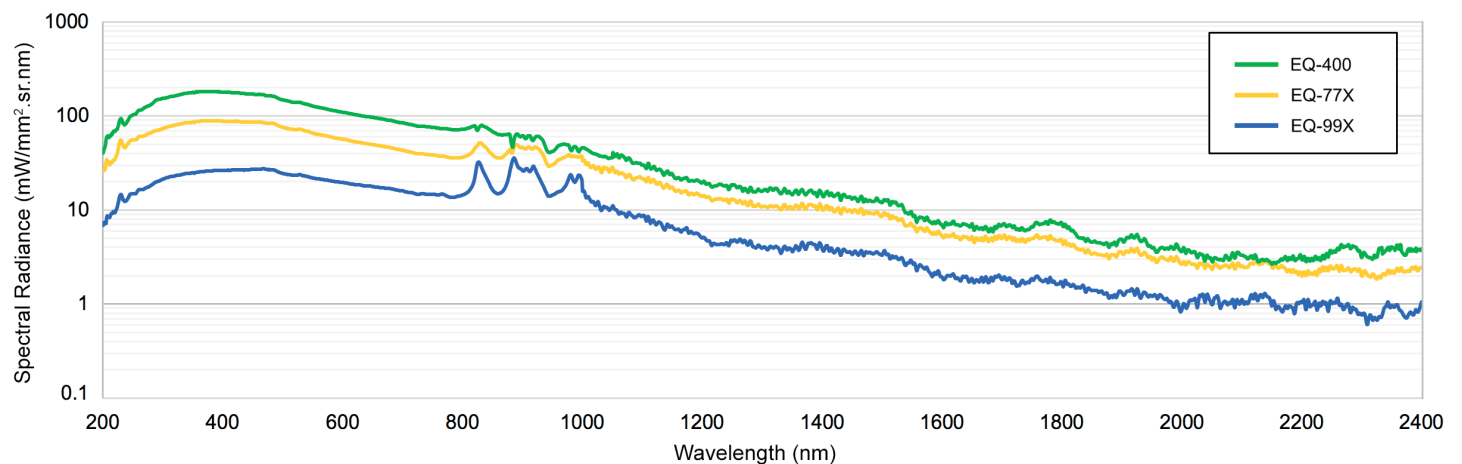
Models

LDLS are sold as systems. Each EQ-99X system includes a lamp head, controller, remote control, and necessary cables.

Part Number	Description	Wavelength Range
EQ-99X-QZ-S	EQ-99X with Quartz Window	170 nm – 2500 nm
EQ-99X-MGF-S	EQ-99X with MGF Window	170 nm – 2500 nm
EQ-99X-YAG-S	EQ-99X with YAG Window	190 nm – 2500 nm
EQ-99X-BK7-S	EQ-99X 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
EQ-99X-RB5	Replacement Bulb (Field Replaceable)	170 nm – 2500 nm
EQ-99-RW-QTZ	Replacement Window, Quartz (Field Replaceable)	170 nm – 2500 nm
EQ-99-RW-MGF	Replacement Window, MGF (Field Replaceable)	170 nm – 2500 nm
EQ-99-RW-YAG	Replacement Window, YAG (Field Replaceable)	190 nm – 2500 nm
EQ-99-RW-BK7	Replacement Window, BK7 (Field Replaceable)	350 nm – 2500 nm

Facility Requirements

Electrical	100-240 V~; 2.5 A; 50-60 Hz
Cooling	No auxiliary cooling required
Nitrogen Purge	Recommended. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2
Ambient Temperature	15-35 °C

Optional Accessories

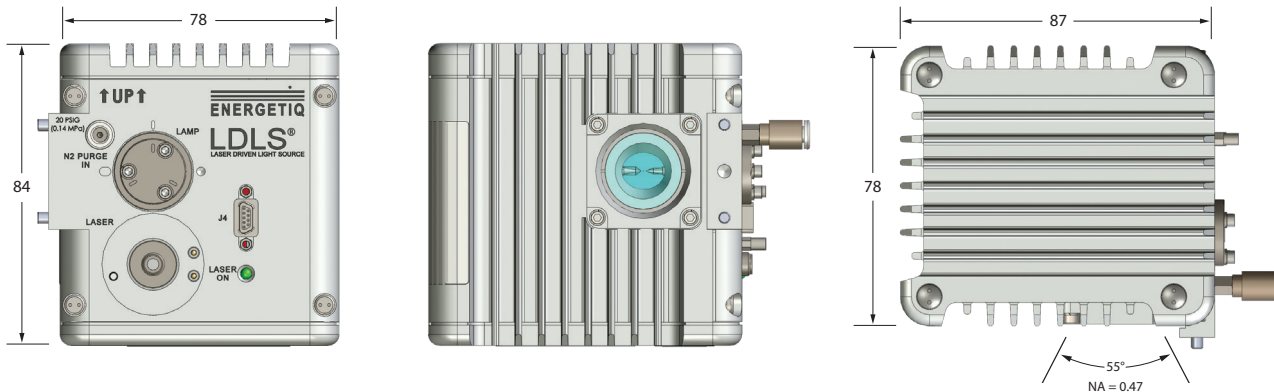
Part Number	Description
EQ-99-EWP	12 Month Extended Warranty Protection for EQ-99X
EQ-99-MGR	Smart controller with shutter control, status monitoring, operating hours (Shutter not included)
EQ-99-SHU	Shutter for use with EQ-99-MGR
EQ-99X-OTM	Optical Mounting Bracket for EQ-99X and EQ-99X-FC
EQ-99-OAP-EFL-4	Off-Axis-Parabolic Assembly - 4" EFL, 2x magnification
EQ-99-OAP-EFL-6	Off-Axis-Parabolic Assembly - 6" EFL, 3x magnification
EQ-99-OAP-EFL-8	Off-Axis-Parabolic Assembly - 8" EFL, 4x magnification

Physical Specifications

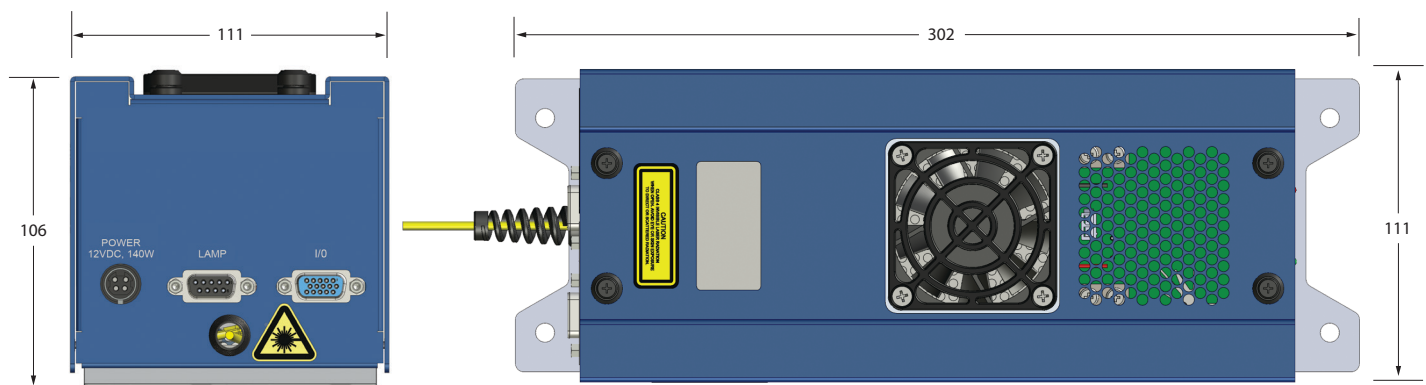
Lamp Head Dimensions (H x W x D)	84 x 78 x 87 mm
Lamp Head Weight	0.7 kg
Controller Dimensions (H x W x D)	106 x 111 x 302 mm
Controller Weight	1.4 kg

Lamp Head Dimensions (Unit: mm)

Drawings are for reference only and are not to scale. STEP-File available.



Controller Dimensions (Unit: mm)



www.energetiq.com/patents

