

EQX-850 LDLS[®]

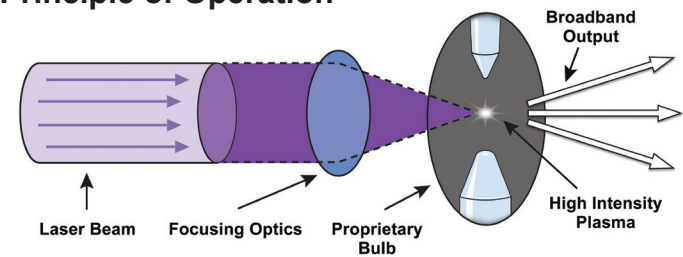
Laser-Driven Light Source



Overview

Energetiq's EQX-850 LDLS is a high-brightness source with a broad wavelength range from UV to VIS 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.

Properties

Wavelength Range	170 nm – 2500 nm
Plasma Size (FWHM)*	With Retro: 140 μm X 290 μm Dual Output: 120 μm X 280 μm
Numerical Aperture	0.58 NA
Bulb Lifetime	10,000 hours
Distance of Plasma from Output Window**	13.7 mm
Laser Class	Class 1 (IEC 60825-1: 2014)

* Average plasma size

** Approximate distance measured with quartz output window

Typical Performance

Spectral Radiance at 500 nm	With Retro: 146 mW/mm ² .sr.nm No Retro: 79 mW/mm ² .sr.nm
Broadband Optical Power***	2.75 W
Optical Interface	Diverging beam (single or dual output)

*** Measured with thermopile

Models

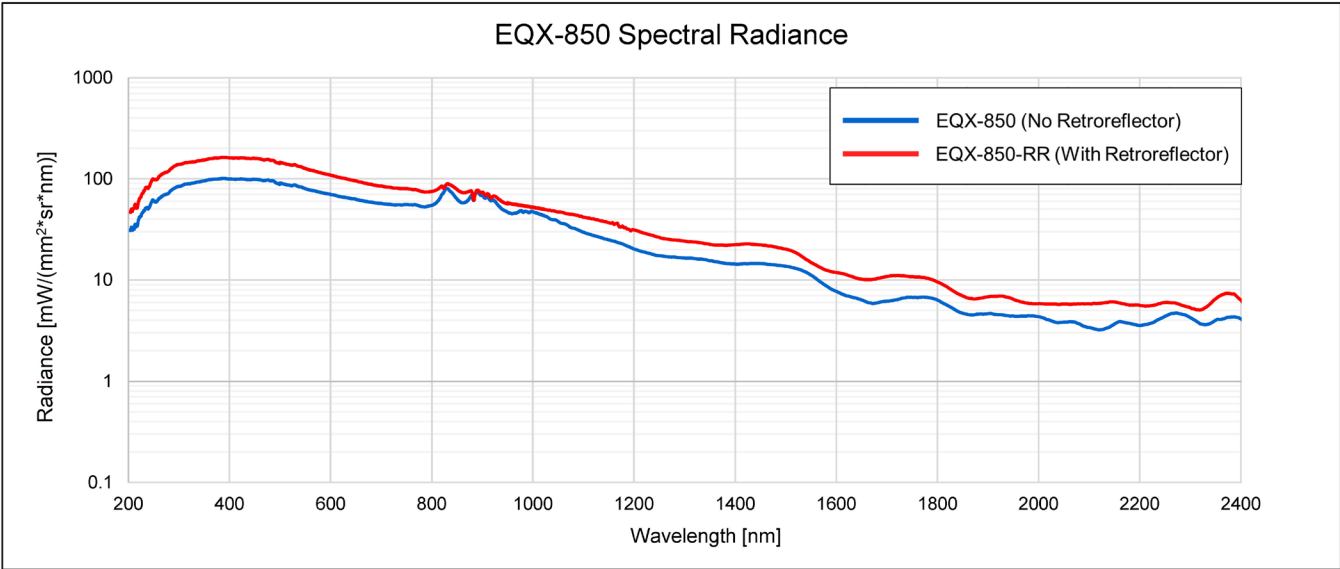
LDLS products are sold as systems. Each EQX-850 system includes a lamp head, controller, remote control, power supply, and necessary cables.

Part Number	Description	Wavelength Range
EQX-850-QZ-S	Quartz window, no retroreflector	170 nm – 2500 nm
EQX-850-BK7-S	BK7 window, no retroreflector	350 nm – 2500 nm

Part Number	Description	Wavelength Range
EQX-850-RR-QZ-S	Quartz window, retroreflector	170 nm – 2500 nm
EQX-850-RR-BK7-S	BK7 window, retroreflector	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.

New Crowns

Part Number	Description	Wavelength Range
EQX-850-CRN-QZ	EQX-850 Replacement Crown (Dual Output, Includes Bulb and QZ Windows)	170 nm – 2500 nm
EQX-850-CRN-BK7	EQX-850 Replacement Crown (Dual Output, Includes Bulb and BK7 Windows)	350 nm – 2500 nm
EQX-850-RR-CRN-QZ	EQX-850 Replacement Crown (Single Output with Retroreflector, Includes Bulb and QZ Window)	170 nm – 2500 nm
EQX-850-RR-CRN-BK7	EQX-850 Replacement Crown, Single Output with Retroreflector, Includes Bulb and BK7 Window	350 nm – 2500 nm

Optional Accessories

Part Number	Description
EQX-850-EWP	12-Month Extended Warranty Protection for EQX-850

Facility Requirements

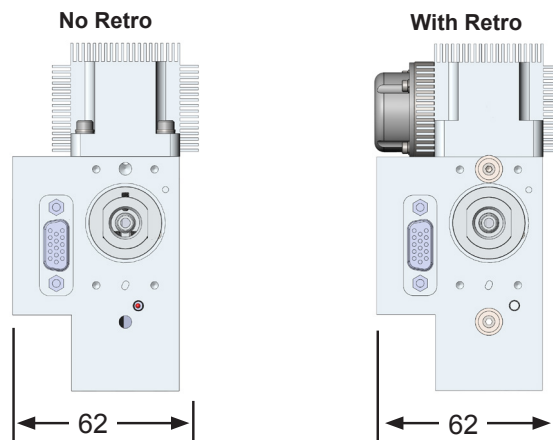
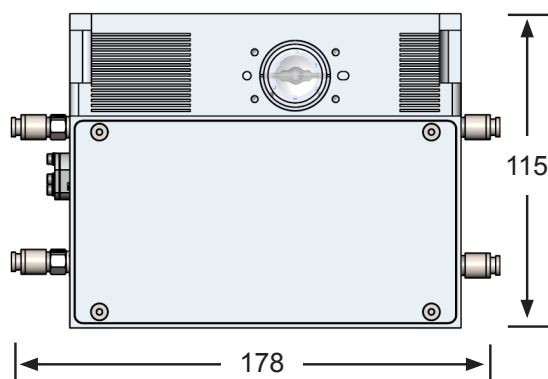
Electrical	100-240V AC, 6.8-2.7A; 50/60 Hz
Cooling (Lamp Head)	Fan (30 CFM forced air cooling)
Cooling (Controller)	Required clearance for air flow
Nitrogen Purge	Required. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2
Ambient Temperature	15-35 °C

Physical Specifications

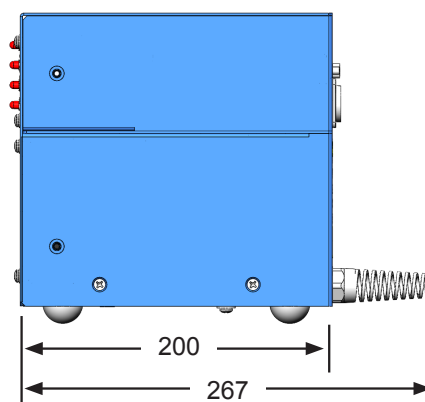
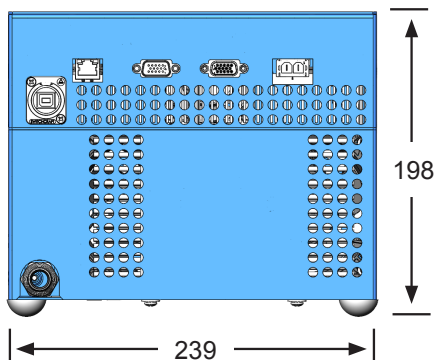
Lamp Head Dimensions (H x W x D)	115 x 178 x 62 mm
Lamp Head Weight (no retroreflector)	1 kg
Controller Dimensions (H x W x D)	198 x 239 x 267 mm
Controller Weight	5.67 kg

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

