

LDLS®

Selection Guide



EQ-99X



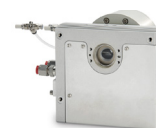
EQ-99X-FC



EQX-850*



EQ-77X



EQ-400

*Retroreflector available

Properties

Wavelength Range	170 nm - 2500 nm	190 nm - 2500 nm	170 nm - 2500 nm	170 nm - 2500 nm	170 nm - 2500 nm
Plasma Size*	100 µm X 280 µm	100 µm X 180 µm	120 µm X 180 µm 140 µm X 290 µm ^{RR}	125 µm X 320 µm	370 µm X 800 µm
Numerical Aperture	0.47 NA	Output fiber: 0.22 NA	.58 NA	0.5 NA	0.5 NA
Lifetime	10,000 hours	10,000 hours	10,000 hours	10,000 hours	10,000 hours
Distance of Plasma from Output Window*	20.1 mm	—	13.7 mm	13.7 mm	19.00 mm
Optical Interface	Diverging beam	Fiber-coupled output	Diverging beam – optional retroreflector	Diverging beam with retroreflector	Diverging beam with retroreflector
Laser Class	Class 1 (IEC 60825-1: 2014)	Class 1 (IEC 60825-1: 2014)	Class 1 (IEC 60825-1: 2014)	Class 1 (IEC 60825-1: 2014)	Class 4 (IEC 60825-1: 2014)

*Approximate distance measured with quartz output window

^{RR}With retroreflector

Typical Performance

Spectral Radiance at 500 nm	~25 mW/mm ² .sr.nm	N/A	~79 mW/mm ² .sr.nm ~146 mW/mm ² .sr.nm ^{RR}	~75 mW/mm ² .sr.nm	~110 mW/mm ² .sr.nm
Broadband Optical Power*	~ 0.75 W	~95 mW	~ 2.75 W	~2.75 W	~15 W

*Measured with thermopile

^{RR}With retroreflector

Physical Specifications

Lamp Head Dimensions	83 x 83 x 92 mm	83 x 83 x 92 mm	115 x 178 x 62 mm	125 x 209 x 94 mm	151 x 149 x 157 mm
Lamp Head Weight	0.7 kg	0.7 kg	1.0 kg	2.2 kg	2.7 kg
Controller Dimensions	108 x 112 x 301 mm	108 x 112 x 301 mm	198 x 239 x 267 mm	156 x 299 x 132 mm	133 x 483 x 583 mm
Controller Weight	1.4 kg	1.4 kg	5.7 kg	2.9 kg	18.8 kg

Facility Requirements

Cooling	No auxiliary cooling required	No auxiliary cooling required	Forced air cooling	Lamp Head: ≥ 0.5 liter/minute, 18 - 30 °C, 100 psig (0.69 MPa) max. inlet pressure	Lamp Head: ≥ 1 liter/minute, 18 - 30 °C Controller: 3 - 4 liters/minute, 18 - 24 °C
Nitrogen Purge*	Recommended. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2	Recommended. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2	Required. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2	Recommended. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2	Required. Grade 4.8 or higher, filtered to 5 µm. 20 psig ±2
Electricity	100-240 V~; 2.5 A; 50/60 Hz	100-240 V~; 2.5 A; 50/60 Hz	100-240 V~; 6.8-2.7A; 50/60Hz	100 – 240 V~; 50/60 Hz, 350 W	200 – 240 V~; 50/60 Hz, 1700 W max.
Ambient Temperature	15–35 °C	15–35 °C	15–35 °C	15–35 °C	15–35 °C

*Purging with nitrogen will mitigate ozone contamination that will impact output in the UV range.

Note: Product information included in this Selection Guide represent typical values and are provided for reference only.

www.energetiq.com/patents



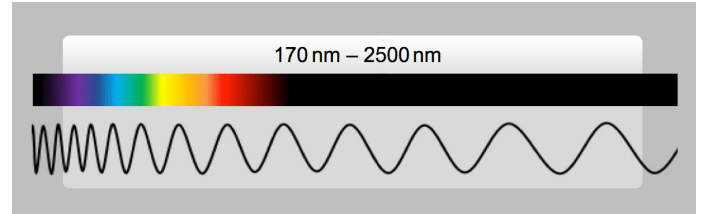
Laser-Driven Light Source (LDLS®)

Product Selection Guide

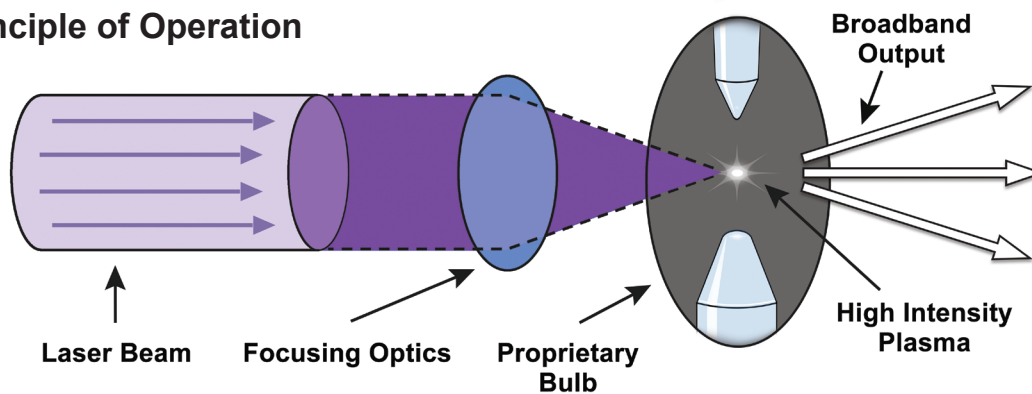
Energetiq introduces breakthrough products using our patented, ultra-bright Laser-Driven Light Source (LDLS®) technology.

- Extremely broad wavelength range
- A long lifetime compared to other sources
- High radiance from a small plasma
- High spectral and spatial stability

Wavelength Range



Principle of Operation



EQ-99X



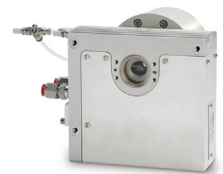
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Spectral Radiance Comparison

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

