EQ-99XFC LDLS™

Compact, Long-Life, High-Brightness, Broadband Laser-Driven Light Source with Fiber-Coupled Output

Advanced imaging and analytical spectroscopy applications in the life sciences and materials sciences need light sources capable of providing extremely high brightness across a broad wavelength range. Traditionally, multiple lamps (Tungsten/Halogen, Xenon-arc, Deuterium) have been used to cover this broad spectral range. However, combining multiple lamps is costly and optically inefficient, and the use of electrodes within these lamps limits their ability to achieve the high brightness or power needed for the most demanding applications. Furthermore, traditional electrode-driven light sources have short life, need to be changed frequently, and during their life the lamp output declines constantly. To address these problems, Energetiq has developed a revolutionary single-light source technology called the LDLS™ Laser-Driven Light Source that enables extreme high brightness with a relatively flat spectrum, from deep ultraviolet through visible into the near infrared, combined with life-time an order of magnitude longer than traditional lamps.

The LDLS EQ-99XFC has integrated collection optics that allow greater ease of use for those needing a fiber connection. The high performance ellipsoidal collector ensures that the ultra-high brightness light and power stability are maintained across the broad spectrum, from 190nm to 2100nm, and efficiently coupled into small diameter optical fibers. Proprietary fiber- protection technology enhances DUV performance and significantly extends fiber life by reducing the effects of solarization. Utilizing a patented laser-driven bulb technology* and ultra-clean construction, the EQ-99XFC is ideal for applications requiring ultra-long lamp life combined with high broadband brightness.

* Multiple Patents Worldwide

Features and Benefits

- FC fiber output for precision coupling
- Efficient, high performance elliptical collection optics
- Proprietary fiber-protection technology
  - Enhanced DUV, longer fiber life
- Very high brightness across spectrum
  - UV-Vis-NIR (190nm - 2100nm)
- Eliminates need for multiple lamps
  - Replaces D2/Tungsten/Xenon Arc
- Superior spatial and power stability
  - Repeatable measurements
- Ultra-clean construction
  - Improved stability & extended life
- Electrodeless operation for long life
  - Reduced cost of ownership

Applications

- UV-Vis-NIR Spectroscopy
- Monochromator Source
- Thin-Film Measurements
- Fiber Optics Testing
- Advanced Imaging/Microscope Illuminators
- Applications requiring long lamp life

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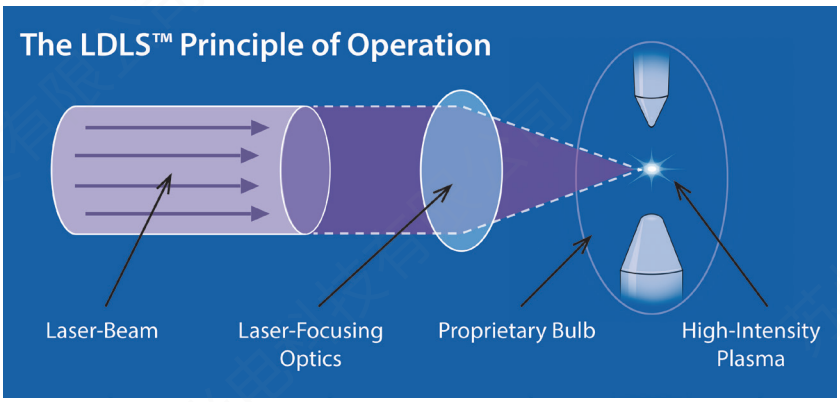


EQ-99XFC lamp house with power supply

Specifications

Overview

- Spectral output from 190nm to 2100nm
- Typical bulb life > 9,000 hrs.
- Broadband optical output via FC connector, NA=O.22
- DUV-Vis and Broadband compatible fibers available from Energetiq, call for details

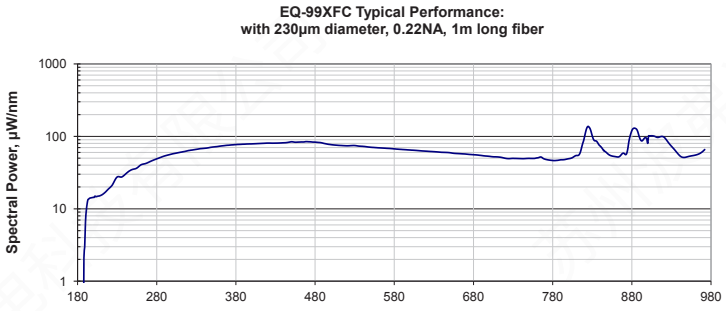
Physical Specifications

	System Dimensions (H x W x D)	Weight
• Lamp House	82.3 x 85.7 x 76.2 mm (3.2 x 3.4 x 3.0 in)	0.7 kg (1.5 lbs)
• Power Supply	107 x 111 x 254 mm (4.2 x 4.4 x 10 in) (excl feet)	1.4kg (3 lbs)

Utility Requirements

• Electrical	100-240v, 50/60Hz, 2.5A
• Cooling	Ambient air, no auxiliary cooling necessary
• Nitrogen	Recommended purging for longest life & for DUV operation, Grade 6
• Compliance	CE Mark, Class 1 Laser Product

Patent Numbers: US 7,435,982; US 7,786,455; GB 2,450,045; Other patents applied for.



Power ratios	
Fiber (um)	Estimated Multiplier
115	0.3
230	1
450	2

About Energetiq

Energetiq Technology, Inc. is a developer and manufacturer of advanced light sources that enable the analysis and manufacture nano-scale structures and products. The Energetiq team combines its deep understanding of the high power plasma physics needed for high-brightness light generation with its long experience in building rugged industrial & scientific products. The result is that users can expect the highest levels of per-formance combined with the highest reliability.

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