

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 and materials sciences need light sources capable of providing extremely high brightness across a broad wavelength range. Traditionally, multiple lamps (such as Tungsten/Halogen, Xenon-arc, or Deuterium) have been used to cover this broad spectral range. However, combining multiple lamps is costly and optically inefficient. 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 a short life during which the lamp output declines constantly necessitating frequent replacement.

To address these problems, Energetiq has developed a revolutionary single-light source technology called the Laser-Driven Light Source (LDLS™) that enables extreme high brightness with a relatively flat spectrum, from deep ultraviolet through visible and into the near infrared, combined with lifetime an order of magnitude longer than traditional lamps.

The EQ-99XFC has integrated collection optics that allow for greater ease of use for those needing a fiber connection. A high performance ellipsoidal collector ensures 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.

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

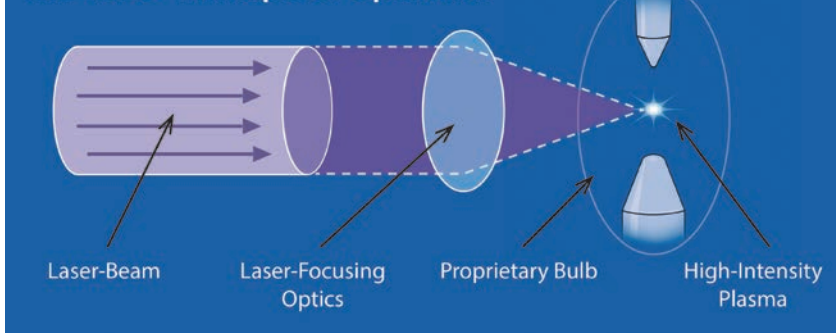
- UV-Vis-NIR Spectroscopy
- Monochromator Source
- Thin-Film Measurements
- Fiber Optics Testing
- Advanced Imaging/Microscope Illuminators
- Applications requiring long lamp life



About Energetiq

Energetiq Technology, Inc. is a wholly-owned subsidiary of Hamamatsu Photonics. Energetiq combines its deep understanding of the 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 performance combined with the highest reliability.

The LDLS™ Principle of Operation

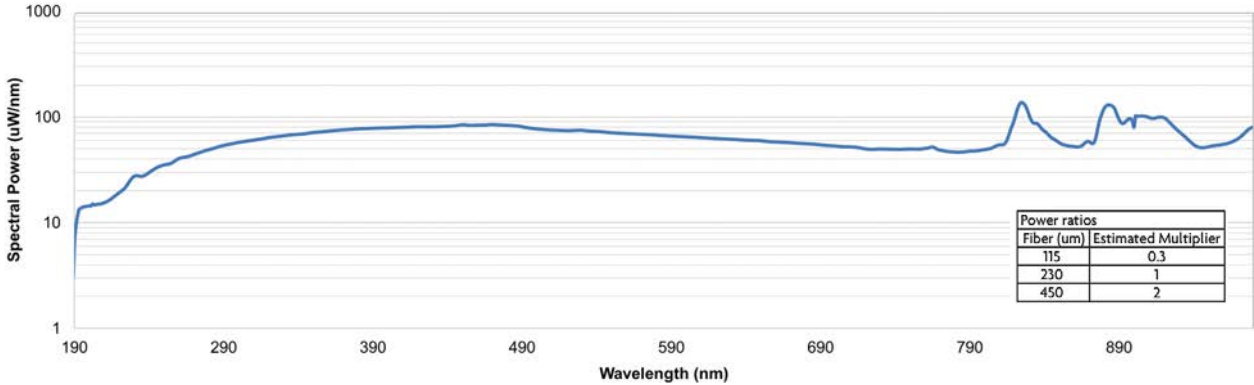


EQ-99XFC lamp house with power supply



EQ-99XFC LDLS Spectral Radiance

EQ-99XFC Typical Performance: with 230µm diameter, 0.22NA, 1m long fiber



Specifications

Overview					
	<ul style="list-style-type: none"> Spectral output from 190nm to 2100nm Typical bulb life > 9,000 hrs. Broadband optical output via FC connector, NA=0.22 DUV-Vis and Broadband compatible fibers available from Energetiq 				
Physical Specifications					
	<table border="1"> <thead> <tr> <th>System Dimensions (H x W x D)</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Lamp House: 82.3 x 85.7 x 76.2 mm (3.2 x 3.4 x 3.0 in) Power Supply: 107 x 111 x 254 mm (4.2 x 4.4 x 10 in) (excl feet) </td> <td> <ul style="list-style-type: none"> Lamp House: 0.7 kg (1.5 lbs) Power Supply: 1.4kg (3 lbs) </td> </tr> </tbody> </table>	System Dimensions (H x W x D)	Weight	<ul style="list-style-type: none"> Lamp House: 82.3 x 85.7 x 76.2 mm (3.2 x 3.4 x 3.0 in) Power Supply: 107 x 111 x 254 mm (4.2 x 4.4 x 10 in) (excl feet) 	<ul style="list-style-type: none"> Lamp House: 0.7 kg (1.5 lbs) Power Supply: 1.4kg (3 lbs)
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Utility Requirements					
<ul style="list-style-type: none"> Electrical Cooling Nitrogen Compliance 	<ul style="list-style-type: none"> 100-240v, 50/60Hz, 2.5A Ambient air, no auxiliary cooling necessary Recommended purging for longest life & for DUV operation, Grade 6 CE Mark, Class 1 Laser Product 				

Patent Numbers: US 7435982; 7786455 -- GB 2450045 -- Other Patents Pending



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Specifications are subject to change without notice.
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