EQ-77 LDLS™

High-Brightness, Long-Life, Broadband Laser-Driven Light Source

Based on the highly successful Laser-Driven Light Source (LDLS) technology, the EQ-77 offers the highest radiance and irradiance available in a truly broadband white light source. The EQ-77 features a compact lamp house, with clean construction that ensures long life and ultimate stability. With a 170nm-2100nm wavelength range and a single-beam output with retro-reflector, the EQ-77 is flexible for a broad variety of applications.

Researchers using light for imaging and analytical spectroscopy in a variety of applications in the life sciences and materials sciences need light sources capable of providing extreme high brightness and power 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 this problem, 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 170nm through visible and beyond, combined with life time an order of magnitude longer than traditional lamps. The LDLS technology is fully embodied in the EQ-77 — an extremely bright and stable, compact CW broadband source that is specifically designed for critical spectroscopic and imaging applications.

** Multiple Patents Worldwide*

Features and Benefits

- Radiance ›40mW/mm².sr.nm (wavelength dependent)
  - Fastest measurements
- Very low noise and excellent spatial stability
  - Precise & repeatable results
- Dual beam output or higher-output Single-beam (using integrated Retro-reflector) for flexibility
  - For optical flexibility
- Compact lamphouse with water-cooling and clean construction
  - Long life and stability
- Extreme high brightness across broad spectrum
  - UV-Vis-NIR (170nm – 2100nm)
- Electrodeless operation
  - Long life and low cost of ownership
- Electronic optical output control
  - Light attenuation

Applications

- Semiconductor Metrology & Inspection
- Monochromator Source
- UV-Vis-NIR Spectroscopy
- Photoemission Electron Microscopy (PEEM)
- Materials Characterization
- Advanced Imaging
- Thin Film Measurements

ENERGETIQ

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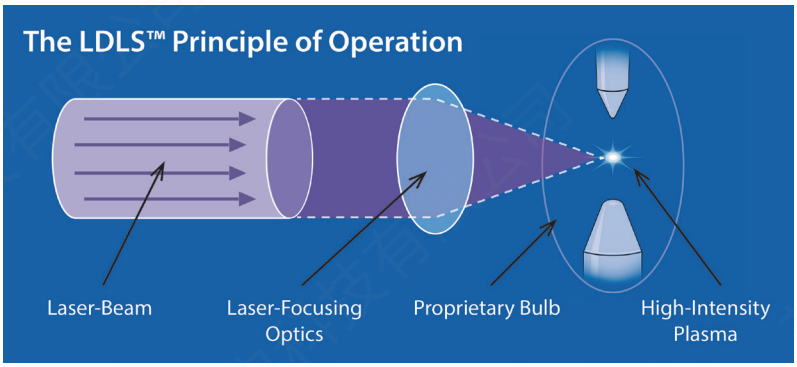


Specifications

Overview

- CW spectral output from 170nm - 2100nm
- Large collectable view angle – Numerical Aperture (NA): up to 0.50 both sides
- Typical bulb life >9,000 hrs.
- Electronic output control for light attenuation

Physical Specifications

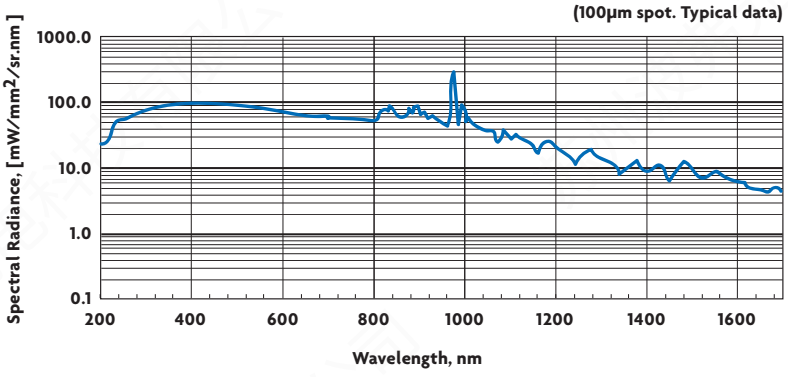
EQ-77	System Dimensions (H x W x D)	Weight
• Lamp House	128mm x 175mm x 102mm	2.2 kg (4.9 lb)
• Laser Drive Module	152mm x 250mm x 132mm	2.9 kg (6.5 lb)

Utility Requirements

• Electrical	100-240 VAC, 350W max.
• Cooling Water	1.0 liter/min (.27 gal/min)
• Purge Nitrogen:	190 sccm @ 20psig; Grade 6 recommended
• Compliance	CE Mark

Patent Numbers: US: 7435982; 7786455; 8525138; 8969841; 9048000; 9185786 -- Japan: 5410958; 5628253 -- Korea: 10-1507617 -- UK: GB2450045 -- *Other Patents Pending*

EQ-77 Spectral Radiance



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 performance combined with the highest reliability.

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