

# LDTLS™

## Laser-Driven Tunable Light Source



### Compact, Long Life, High-Brightness, Broadband with Fiber-Coupled Output

The Laser-Driven Tunable Light Source (LDTLS™) is a compact, fully integrated and highly stable tunable broadband light source that is based on our proven Laser-Driven Light Source (LDLS™) technology. The LDTLS™ utilizes our EQ-77 LDLS™ broadband source and features the highest brightness and output flux available in a tunable broadband light source.

The LDTLS™ offers an extremely long lifetime of ~9000 hours between bulb changes for low cost of ownership. It has high stability, very low noise and is coupled with a precision high-performance monochromator for accurate wavelength selection and repeatable light output across the range of 300nm-1100nm.

The spectral resolution can be customized for application specific purposes and ranges in bandwidth from 1nm to 10nm. The fiber coupled output is both flexible and convenient for delivering wavelength selected light precisely where it is needed.

*\* Multiple Patents Worldwide*

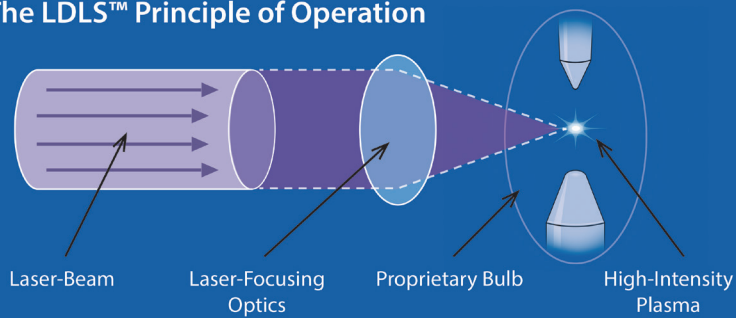
### Features and Benefits

- Highest output flux in the industry for higher throughput
- Long lifetime of ~9000 hours between bulb changes for low cost-of-ownership
- Low noise and high stability for precise measurements
- Fast wavelength tuning up to 200nm per second for faster measurements
- Convenient optical fiber output easily integrates into a range of applications
- Achromatic reflective coupling optics for aberration free radiation collection and focusing
- Etendue-matched monochromator with high efficiency optical design for maximum light throughput

### Applications

- Optical Sensor Testing
- Process Monitoring and Control
- VIS/NIR Spectroscopy
- Scientific Research
- Thin-Film Measurements
- Materials Characterization

## The LDLS™ Principle of Operation



## Specifications

### Overview

- Spectral Range: 300nm to 1100nm
- Typical Bulb Life: >9,000 hours
- Optical Fiber Output via SMA connector, NA = 0.39
- Up to 3mW output power (Wavelength Dependent – 6.5nm bandwidth and 1500µm fiber optics)

### Physical Specifications

#### LDLS™

- Tunable Light Source
- Power Supply

#### System Dimensions (H x W x D)

266mm x 432mm x 222mm  
152mm x 250mm x 132mm

#### Weight

16.6 kg (36.5 lb)  
2.9 kg (6.5 lb)

### Utility Requirements

- Electrical: 100-240 VAC, 50/60Hz
- Cooling Water: 1.0 liter/min (.27 gal/min)
- Purge Nitrogen: 0.4 liter/min
- Compliance: CE Mark

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

## 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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