

# 640

## Single Frequency CW DPSS Laser



Our 640 Laser delivers unrivalled continuous-wave single frequency performance at market-leading output powers from a small footprint — making it suitable for integration with existing systems and a wide range of applications. The 640 provides outstanding beam characteristics, high output stability, extremely low noise, and versatile software package.

### KEY FEATURES



**Narrow Linewidth**  
 $\leq 0.5$  MHz



**High Power Stability**  
 $\leq 2.0$  % over 8 hours



**High Spectral Stability**  
 $\pm 1$  pm over 8 hours



**Excellent Beam Quality**

### APPLICATIONS

Raman Spectroscopy - Brillouin Scattering  
Holography - Flow Cytometry - Optical Manipulation - Semiconductor - Imaging - Metrology - Interferometry, and more.

### Specifications

#### Output Beam Parameters:

Output Power	500, 750, or 1000 mW*
Wavelength	640 nm
Spectral Bandwidth	$\leq 0.5$ MHz
Spatial Mode	TEM <sub>00</sub>
Spectral Stability	$\pm 1.0$ pm (over 8 hour operation)
Coherence Length	$> 100$ m
Output Power Stability	$\leq 2.0$ % (over 8 hour operation)
Output Power Noise	$\leq 0.1$ % RMS (10 Hz – 10 MHz)
Beam Divergence	$\leq 1$ mrad, diffraction limited
Beam Diameter at Output Aperture	0.8 – 1.2 mm
Beam Pointing Stability	$\leq 5$ $\mu$ rad/°C
Polarisation Ratio	$\geq 100:1$ , vertical

#### Integration Features:

Plug-In USB Connectivity	Combined Heatsink
Versatile Control Software	Remote Diagnostic Support

#### Laser Head Dimensions:

L x W x H	207 x 80 x 65 mm
Beam Height	70 mm

#### Environmental Conditions:

Ambient Temperature Range	18 – 30 °C
Laser Head Interface Stability	$\pm 1.5$ °C
Storage	0 – 50 °C
Humidity	5 – 95 %, non-condensing

#### Optional Accessories:

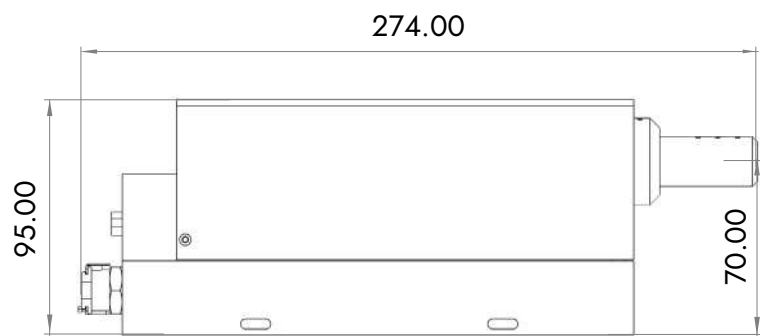
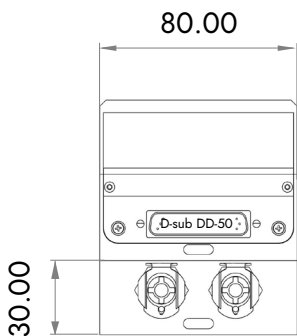
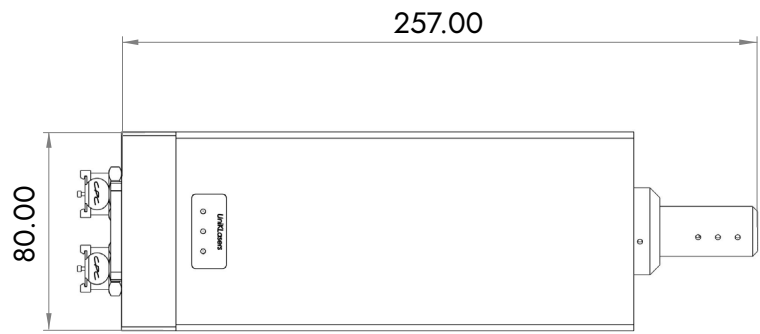
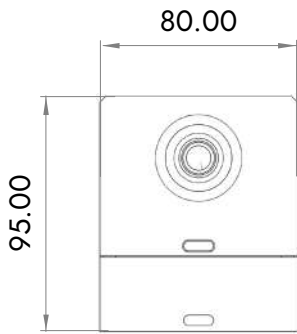
Heatsink	Fan-Assisted
	Water-Cooled with Thermoelectric Chiller
External Power Control Module	0 – 100 %, continuous
Tuning Range, mode-hop free	25 – 50 GHz

Low Power Alignment Beam Mode

\* Other output powers available on request

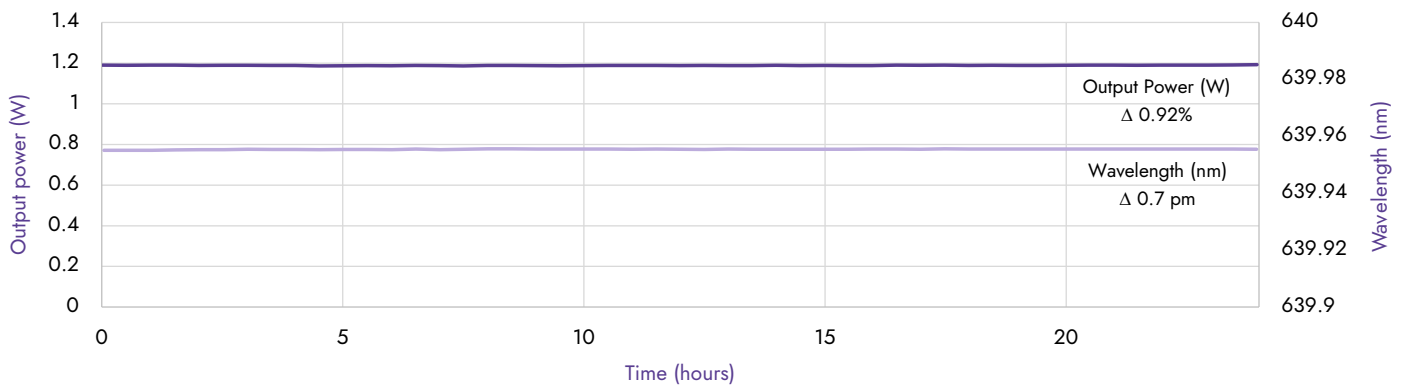
### Laser and Heatsink Dimensions

274 x 80 x 95 mm



### Performance Data

Longterm Wavelength and Power Stability



### CONTACT US

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DESIGNED & MANUFACTURED IN THE UK 



**AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION**  
**CLASS 4 LASER PRODUCT**  
**MAX. POWER: 1000 mW**  
**(IEC 60825-1)**