

SWL-7500 Single Wavelength Lasers



- Exceptional fixed wavelength and power stability
- All solid-state with a tiny footprint
- Factory set wavelengths eg 633, 660, 780, 785, 1064 nm
- 150 mW at 785 nm with 200 kHz linewidth for precision Raman Spectroscopy
- Custom wavelengths upon request
- Rugged, OEM-ready
- Tiny footprint
- Stable linewidth and power output
- Single longitudinal mode
- U.S. Patent #6,556,599

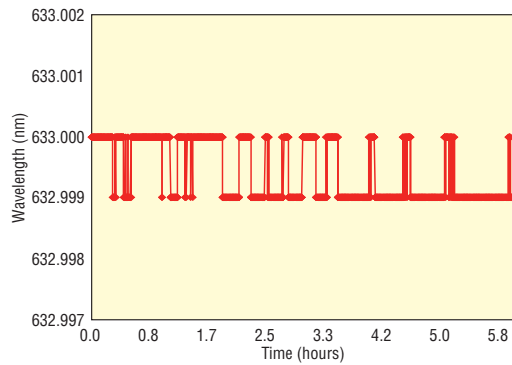
The SWL-7500 series lasers offer extremely narrow linewidths from an OEM-ready platform designed for stability and longevity. This new addition to our market-leading line of external-cavity diode lasers offers single longitudinal mode performance at a single, fixed wavelength. The user may choose the output wavelength anywhere within a specified wavelength range and the factory will build the laser at that precise wavelength. Long-term wavelength and power stability makes this laser a miniature work horse. With a footprint that is smaller than a business card, the laser will fit in most instrument designs with room to spare. We have carefully designed these lasers to operate continuously on a single longitudinal mode and minimal frequency drift at the heart of any imaging, metrology, or spectroscopic measurements.

Fiber coupling of the SWL-7500 is now available. The SWL-7500 laser series performance is augmented by the convenience, ruggedness, and flexibility of a line of fiber-coupled models. Fiber-coupling means that the SWL-7500 is even easier to integrate into your experiment or instrument. High coupling efficiency into the fiber guarantees there is power to spare with exceptional mode quality. And the simple, robust design will hold the optimized alignment over the long haul through varying environments. Each unit features an integral optical isolator which provides >35 dB of isolation to guarantee continuous single-mode performance.

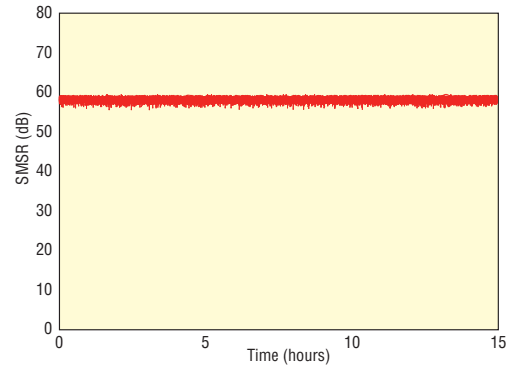
Applications

- Raman imaging and spectroscopy
- Data encryption
- Interferometry
- Fiber gyroscopes
- Terahertz generation
- LIDAR

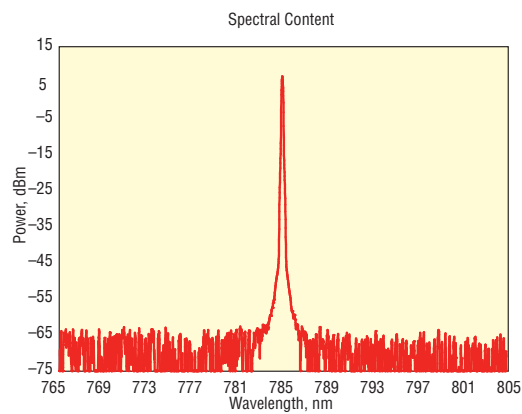
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Highly stable cavity design yields extremely low wavelength drift



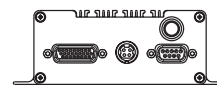
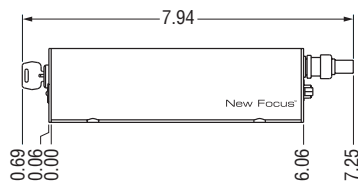
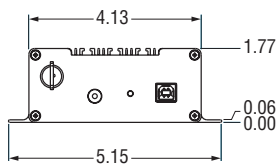
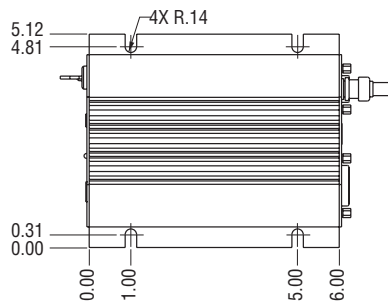
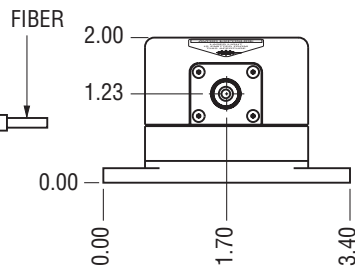
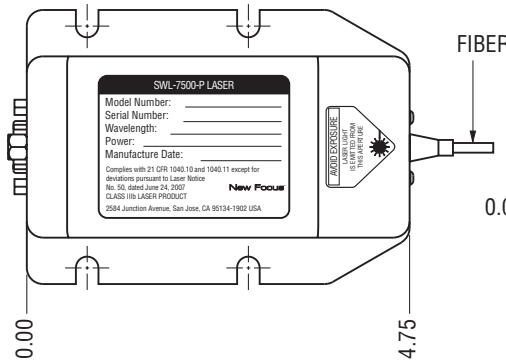
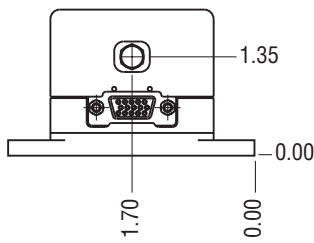
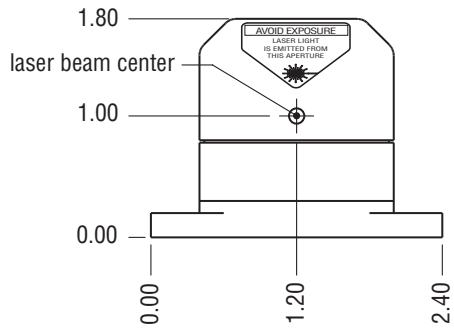
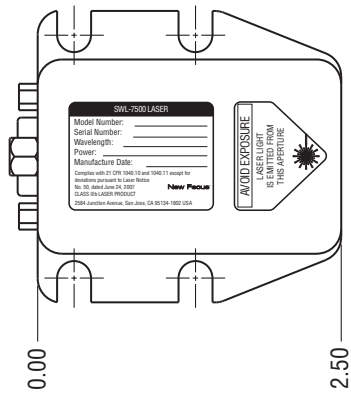
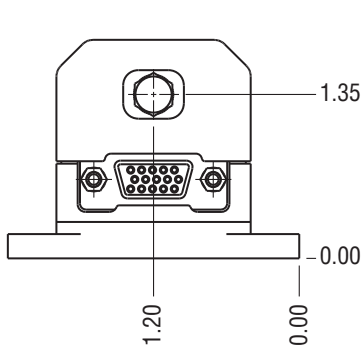
Long-term side mode suppression ratio measurement



Amplified Stimulated Emission (ASE) spectrum

SWL-7500 OEM-GRADE CONTROLLER

- Low current noise
- High-capacity TEC controller
- Compact, simple design
- RS-232 interface with GUI or binary control
- CE & RoHS compliant
- Passive cooling
- USB control and card-level version coming soon



SWL-7500 Single Wavelength Lasers

	SWL-7504	SWL-7505	SWL-7509	SWL-7513	SWL-7513-H	SWL-7521
Available Wavelengths	632.5-635 nm	650-660 nm	682-692 nm	765-785 nm	780-790 nm	1064 nm
Output Power	8 mW @ 633 nm	20 mW @ 660 nm	8 mW @ 687 nm	70 mW @ 780 nm, 785 nm	150 mW @ 785 nm	100 mW @ 1064 nm
Center Wavelength Stability	±1.5 pm					
Power Stability	<2%					
Linewidth	<200 kHz					
ASE	>-65 dBc					
Side Mode Suppression Ratio	<-50 dBc					
Dimensions	2.5 x 1.25 x 1.25 in.					
Power Requirements	5 VDC, 7 A					
Operating Temperature Range	5-45 °C					
Storage Temperature Range	-20 to +60 °C					
Rated Life	>5000 hrs	>5000 hrs	>5000 hrs	>6000 hrs	>6000 hrs	>6000 hrs



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