

## High performance diode laser modules

The Cobolt MLD Series lasers consists of high performance fixed wavelength diode laser modules covering a spectral range between 405 and 660nm. The lasers offer optimum beam quality and modulation performance from a small and compact package. Manufacturing using Cobolt's unique HTCure Technology ensures world-class quality and reliability, as well as unmatched robustness.

The Cobolt MLD lasers provide a spectral complement to the company's lines of high performance CW DPSS lasers for demanding fluorescence analysis applications such as confocal microscopy and flow cytometry. In addition, the Cobolt MLD lasers add the feature of direct intensity modulation capability, allowing fast and deep modulation from versatile input signals. The selection of wavelengths combined with direct intensity modulation capability make the Cobolt MLD lasers a perfect choice also in applications such as Optogenetics, Microlithography or Metrology.

Cobolt has designed an easy-to-integrate compact diode laser module with all control electronics fully integrated in a laser head of industry standard size. An optional external control box allows CDRH compliant operation with a key-switch and emission indicators.

The Cobolt MLD Series lasers are intended for stand-alone use in laboratory environment, or for integration as an OEM component in analytical or metrology instrumentation equipment.

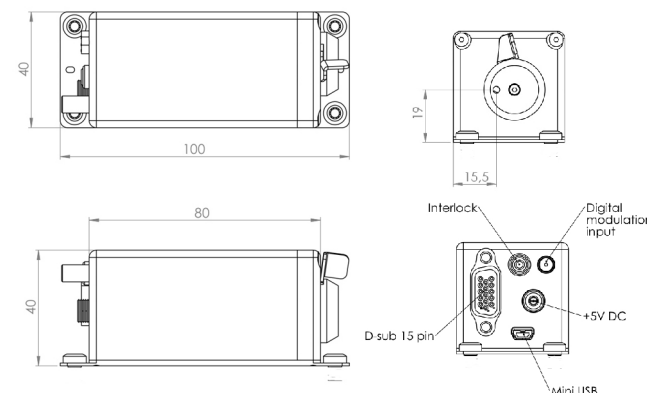


## Specifications

Wavelength [nm]	405	445	473	488	515	640	660
Wavelength precision	±5* nm						
Power** [mW]	100	50	80	60	25	100	
Beam divergence (full angle) [mrad]	<1.1	<1.2		<1.3		<1.7	
Spatial mode	TEM <sub>00</sub> , M <sup>2</sup> <1.2						
Beam diameter at aperture***	700 μm ± 100 μm						
Beam symmetry	>0.90:1						
Noise, 250 Hz - 2 MHz (rms)	<0.2%						
Power stability over 8 hrs	<0.5%						
Spectral linewidth (FWHM)	<1.2 nm						
Polarization ratio (vertical)	>1:100						
<b>Modulation</b>							
Digital modulation	Input signal: 0 to 3.3-5.0 V TTL						
bandwidth	DC - 150 MHz						
extinction ratio	>10000:1						
Rise/Fall time	< 2.5 ns						
Analogue modulation	Input signal: 0-1 V (1 kOhm or 50 Ohm)						
bandwidth	DC - 2 MHz						
extinction ratio	>10000:1						
Rise/Fall time	<200 ns						
Remote ON-OFF	Input signal: 0 to 3.3-5.0 V TTL						
frequency	DC - 500 kHz						
extinction ratio	1:inf						
Rise/Fall time	<500 ns						
Maximum base plate temperature	50 °C						
Total system power consumption	<10 W						
Communication	RS-232 and USB						
Model number structure	wavel-06-01-pwr-100 (CDRH: Control box with key-switch included) wavel-06-01-pwr-200 (OEM: Auto-start mode)						
Warranty	12 months						

\* Fixed wavelength with given accuracy in central wavelength  
 \*\* Given value is at 100%. The output power can be adjusted using Cobolt Monitor MLD software or using computer commands.  
 \*\*\* The output beam diameter can be tailored to specific customer requirements

Laser head with integrated control electronics



Control box with key-switch for CDRH operation

