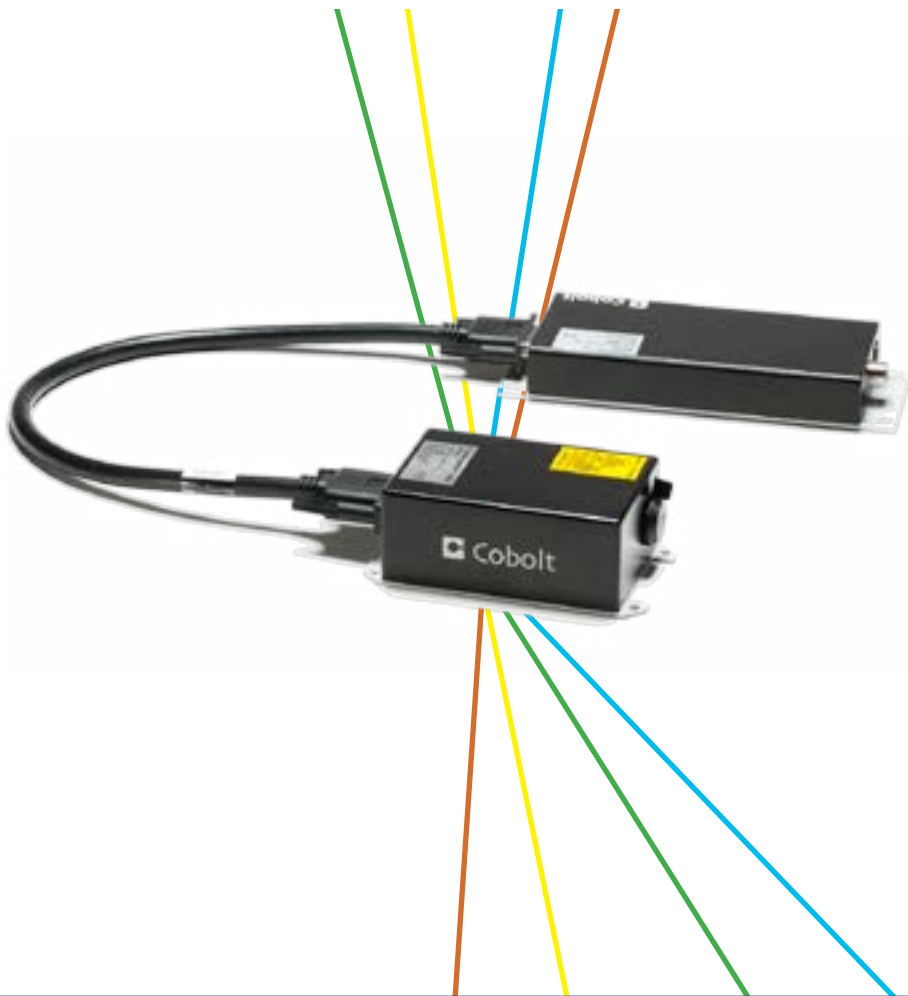




Cobolt Tor™ Series

Compact high repetition rate Q-switched lasers



Compact and powerful Q-switched lasers
1064 nm and 532 nm
up to 1.0 W average output power
> 7kHz pulse repetition rate
< 5ns pulse width
up to 150µJ pulse energy

The Cobolt Tor™ Series lasers are compact and powerful Q-switched DPSS lasers. The sophisticated cavity design of these lasers provides a unique combination of high pulse repetition rates, short pulse lengths and exceptional pulse-to-pulse stability. In addition, the emission is generated in a perfect TEM₀₀ beam. The lasers are manufactured using Cobolt's proprietary HTCure™ technology and

packaged into a compact laser head, offering an outstanding level of robustness and reliability and making these lasers highly suitable for OEM integration into demanding environments. The lasers are equipped with a pulse-count feedback loop to ensure minimum drift in output power and repetition rate, and also provide a pulse-trigger output signal for convenient synchronisation to detection systems.

The combination of compact format, high level of robustness, high average power and pulse energy performance make the Cobolt Tor™ Series lasers ideal light sources for a large variety of industrial and scientific applications, including micro-dissection, MALDI-TOF, range-finding, Raman-LIDAR and micro-machining.

Specifications

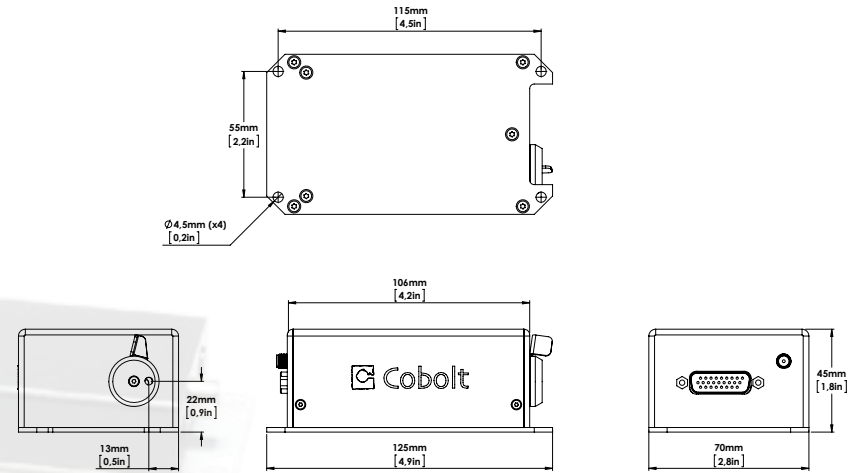
Parameter*	Specified values	
Wavelength ¹	1064.2 ± 0.6 nm	532.1 ± 0.3 nm
Average Power	> 1.0 W	> 0.4 W
Pulse Energy	> 150 µJ	> 60 µJ
Peak Power ²	> 30 kW	> 12 kW
Pulse width	< 5 ns	
Repetition Rate	> 7 kHz	
Pulse-to-pulse jitter	< 1 µs	
Long-term repetition rate stability (8hrs ± 3°C)	< 3%	
Polarization Extinction Ratio (PER)	Vertical > 100:1	
Beam symmetry at aperture	> 0.90:1	> 0.85:1
Spatial mode	TEM ₀₀ , M ² < 1.3	
Operating temperature	10-40°C	
Total system power consumption	< 63 W, typical < 30 W	
Recommended heat sink thermal resistance	0.2 K/W	
Operating modes	- constant current - burst mode operation - constant repetition rate (OEM only)	
Output trigger signal	- pulse trigger output via SMA available	
Laser head dimensions	[mm] [inches]	125 x 70 x 45 4.1 x 2.4 x 1.6
Controller dimensions	[mm] [inches]	190 x 72 x 28 7.6 x 2.9 x 1.1
Communication	USB	
Model number structure	CDRH (key-switch for on/off)	OEM (auto-start mode)
	wavel-05-71-pwr-700	wavel-05-71-pwr-800
Warranty	12 months	

* actual parameters can be tailored for specific applications. Contact Cobolt for more information.

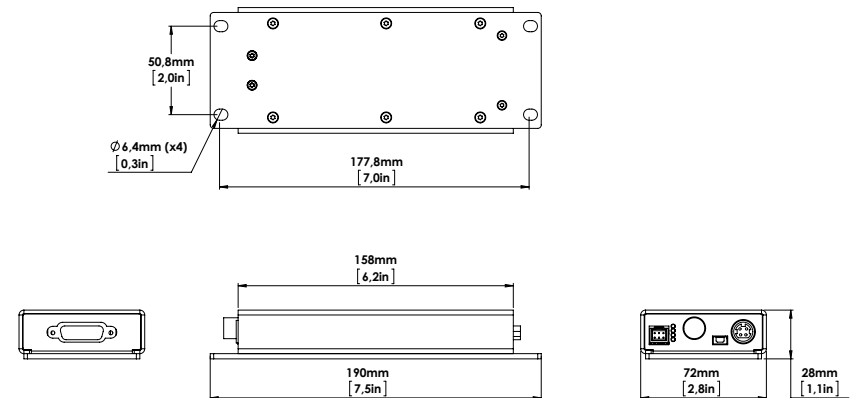
- The wavelength is specified in air.
- Assuming a top hat profile, Peak Power (kW) = Pulse Energy (µJ) ÷ Pulse duration (ns).

Full specifications can be found in the owner's manual. Subject to change without notice. Rev 1411

Laser head



Controller



Options & Accessories

- Laser head heatsink
- Communication cable (USB)

HTCure™ is a Cobolt proprietary technology for manufacturing of ultra-robust and reliable laser sources, allowing Cobolt to offer market leading warranty terms.

