



Cobolt

Cobolt Tor™ Series

High performance Q-switched lasers



Compact and powerful Q-switched lasers

1064nm and 532nm

Up to 1.0 W average output power

> 7 kHz pulse repetition rate

< 5 ns pulse width

Up to 150 μ J 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 propri-

etary HTCure™ technology and packaged into a sealed 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 feed-back loop to ensure minimum drift in output power and repetition rate, and also provide a pulse-trigger

output signal for convenient synchronisation of 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-

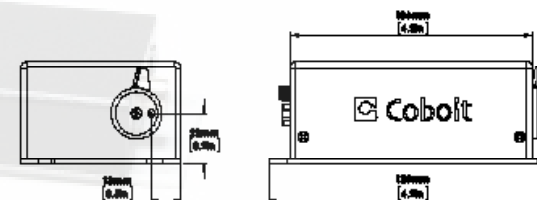
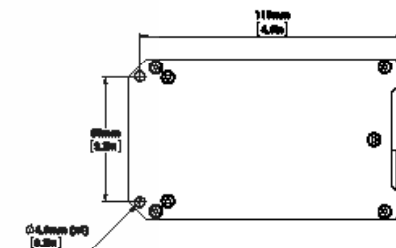
Parameter*	Specified values	
Wavelength ¹	1064.2 ± 0.6 nm	532.1 ± 0.3 nm
Average power	>1.0 W	> 0.4 W
Pulse energy	> 150 µJ	> 60 µJ
Peak power ²	> 30 kW	> 12 kW
Pulse width	< 5 ns	
Repetition rate	> 7 kHz	
Pulse-to-pulse jitter	< 1 µs	
Long-term repetition rate stability (8hrs ± 3°C)	<3%	
Polarization 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.

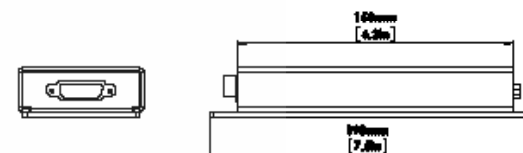
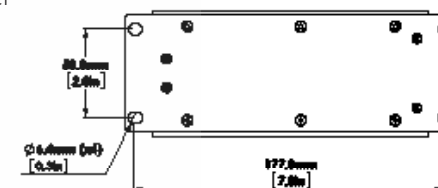
1. The wavelength is specified in air.
2. Assuming a top hat profile, peak power (kW) = pulse energy (µJ) ÷ pulse duration (ns).

Full specifications can be found in the owner's manual. Subject to change without notice. Rev 1410

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.

