

# Cobolt Tor™ XS

Ultra-Compact | Triggerable | Q-Switched Lasers



- Pulse Energy up to 100  $\mu$ J and 100 mW of average power
- Up to 1 kHz pulse repetition rate
- 3 - 5 ns pulse duration
- Ultra-robust design
- High performance pulsed lasers at 532 nm and 1064 nm

The Cobolt Tor™ XS lasers are high performance Q-switched diode pumped 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 a high quality TEM<sub>00</sub> beam.

The lasers are manufactured using Cobolt's proprietary 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 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, especially LIBS and photoacoustics.

PRELIMINARY

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Wavelength in air (nm)	532.1 ± 0.3	1064.2 ± 0.6	
Average Power @1 kHz	50 ± 5 mW	50 ± 5 mW	100 ± 10 mW
Pulse Energy	50 ± 5 µJ	50 ± 5 µJ	100 ± 10 µJ
Peak Power	> 13 kW	> 13 kW	> 27 kW
Pulse Width	2 - 3.5 ns		
Repetition Rate	Single pulse up to 1 kHz		
Pulse-to-Pulse Jitter	< 2 µs		
Long-term stability (8 hrs ± 3°C)	< 5 %		
Spatial mode (TEM <sub>00</sub> )	< 1.1	< 1.3	
Beam symmetry at aperture	> 0.85 : 1		
Polarization ratio (linear, vertical)	> 50:1		
Total system power consumption	< 15 W		
Operating temperature	10-40 °C		
Maximum laser head baseplate temp.	50 °C		
Recommended heat sink thermal resistance	0.7 K/W		

Laser head dimensions	100 x 40 x 40 (mm) 3.9 x 1.6 x 1.6 (in)
Key box dimensions	82 x 56.6 x 32 (mm) 3.2 x 2.2 x 1.3 (in)
Communication	USB or RS-232

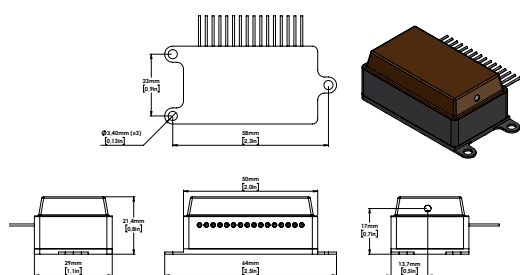
### Model Number

	CDRH/CE Compliant (key-switch for on/off)	OEM (auto-start mode)
USB Communication	wavel-06-71-pwr-100	wavel-06-71-pwr-200
RS-232 Communication	wavel-06-71-pwr-300	wavel-06-71-pwr-400

### Electrical Interface

Interface	Location	Description
Input power	Laser Head	DC plug 2.5 mm / 5.5 mm female
Remote interlock connector	Laser Head	OEM : Molex pin 1 & 2
Data port	Laser Head	USB-type mini B
Key control Box connector	Laser Head	Molex 10-pin male
Pulse Trigger Input	Laser Head	SMA female
Laser Head connector	Key box	VGA D-SUB 15-pin male
Remote Interlock connector	Key box	CDRH : 3.5 mm audio female

Laser head available in component format (OEM only) with drive electronics delivered separately.



This device is sensitive to Electrostatic Discharge (ESD). Always handle diode lasers with extreme care to prevent electrostatic discharge, the primary cause of unexpected diode failure.



**WARNING LASER RADIATION**  
Avoid Exposure to beam  
Class 3B Laser Product  
Classified per IEC 60825-1:2014

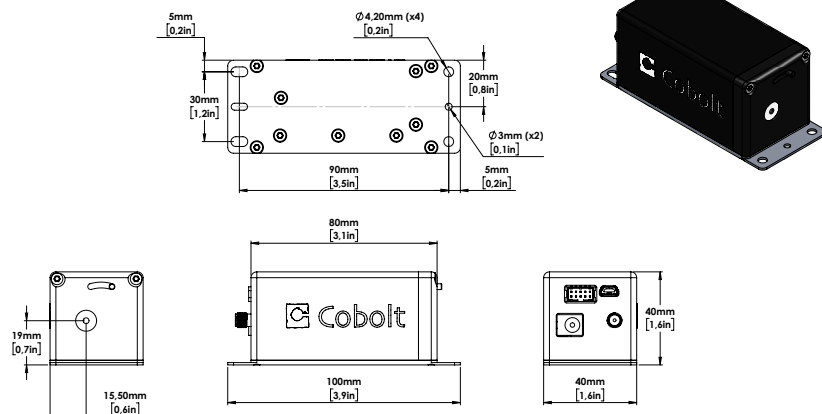


Wvl (nm)	Max. Pulse Energy (µJ)
532	200
1064	200

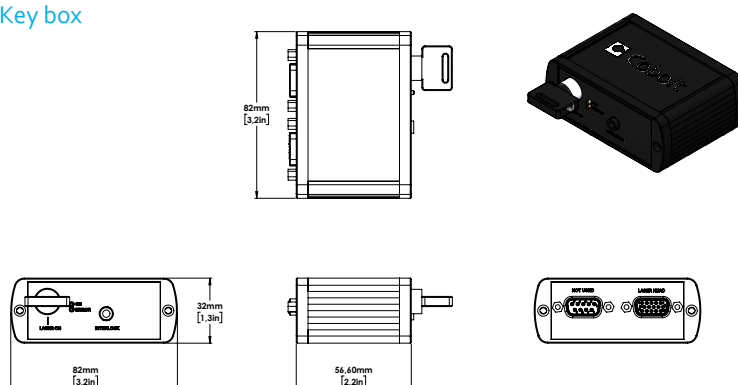
# Cobolt Tor™ XS

## Mechanical Specifications

### Laser Head



### Key box



## Cobolt Head Office

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