

OBIS XT

Powerful Compact CW DPSS Laser Platform

The new and powerful OBIS XT DPSS laser both extends and complements the wavelength range of the successful OBIS LS/LX and Sapphire lasers into the UV.

The lasers' compact size, integrated controller, and low heat dissipation simplify integration, saving time and costs. OEM and end-user configuration, as well as versatile interfacing with RS-232, RS-485, and USB provide exceptional flexibility and control in users' instruments and experimental set-ups.

With UV wavelengths of 360 nm and 349 nm, laser power of up to 100 mW, and industry-leading reliability, OBIS XT enables more applications in the field of life sciences.

FEATURES & BENEFITS

- Integrated control electronics for a reduced footprint in instruments
- Low heat dissipation simplifies the integration into compact set-ups
- Perfect TEM₀₀ beam quality and low noise helps deliver more precise data
- 20 mW, 60 mW, and 100 mW in the same compact package supports powerful applications without redesigning the instrument
- Versatile interfacing with RS-232, RS-485, and USB provides easy and flexible configuration

APPLICATIONS

- Flow Cytometry
- Confocal Microscopy
- Genomics and Proteomics
- Semiconductor Inspection
- Metrology



SPECIFICATIONS	OBIS 349 XT	OBIS 360 XT
Wavelength ¹ (nm)	348.8	360.4
Output Power ² (mW)	20, 60, 100	
Spatial Mode	TEM ₀₀	
Beam Quality (M ²)	≤1.1	
Beam Asymmetry	≤1:1.1	
Beam Diameter (mm) (1/e ²)	0.7 ±0.05	
Beam Divergence (mrad) (full-angle)	<0.8	
Beam Pointing Stability (over 2 hours after warm-up and ±3°C) (μrad)	<30	
Beam Pointing Stability Over Temperature (μrad/°C)	<5	
Noise (% RMS) (20 Hz to 20 MHz)	≤0.25	
Peak-to-Peak Noise (%) (20 Hz to 20 kHz)	<1	
Long-Term Power Stability (%) (8 hours, ±3°C)	<2	
Warm-Up Time ³ (minutes) (from cold start)	<5	
Polarization Ratio	Minimum 100:1, Vertical ±5°	
Laser Drive Modes	CW, Computer Control, Coherent Connection Compatible	
Static Alignment Tolerances		
Beam Position from Reference ⁴ (mm)	<0.5	
Beam Angle (mrad)	<2.5	
Beam Waist Position at Exit Window (mm)	±250	
Laser Safety Classification	3B	
Power Consumption (W)	Typical 18, Max. 42	
Laser Head Baseplate Temperature (Maximum, °C)	45 at 35 ambient on Sapphire Heat Sink	
Heat Dissipation of Laser Head 5 (W)	Typical 18, Max. 42	
Ambient Temperature		
Operating Condition ⁶	10 to 35 °C (°F)	
Non-Operating Condition ⁷	-20 to +60 °C (°F)	
Shock Tolerance (6 ms)	7 g laterally, 15 g vertically	
UTILITY AND ENVIRONMENTAL REQUIREMENTS		
Operating Voltage ⁸ (VDC)	12 ±2	
Dimensions (L x W x H)		
Laser Head	125.0 x 70.0 x 36.5 mm (4.92 x 2.76 x 1.44 in.)	
Weights		
Laser Head	450 g (0.99 lbs)	

1 Laser-to-laser tolerance, wavelength in air, all OBIS XT versions ±1 nm.

2 Specifications are valid for 100% power. Residual laser emission at 697.6/720.8 nm fundamental within beam at 100 mm distance <0.1 mW.

3 For XT versions typical power-on delay 1 minute.

4 See mechanical drawing for exit beam location.

5 Max. 42 W for 100 mW OBIS XT laser.

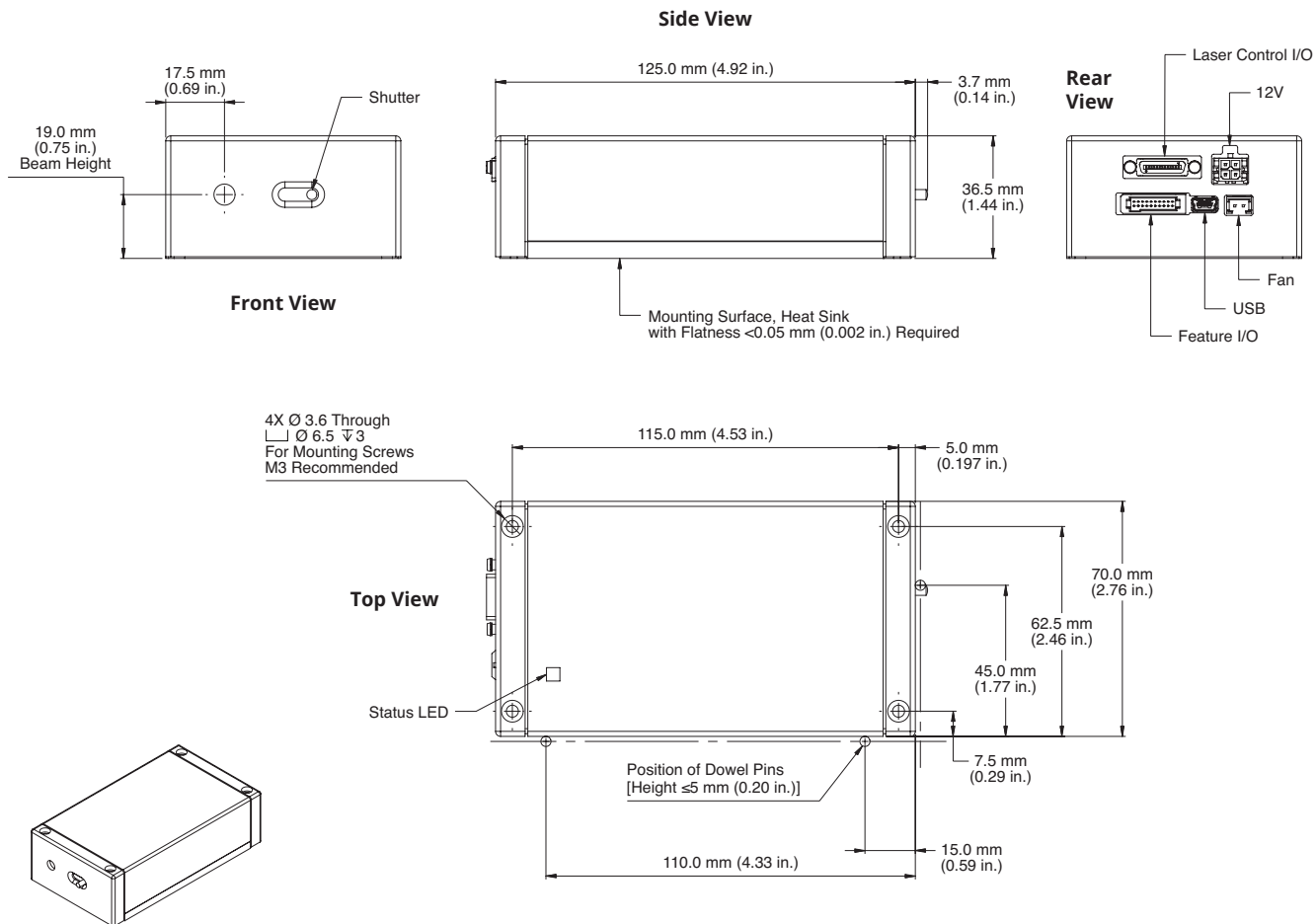
6 Non-condensing with Sapphire or other equivalent heat sink.

7 Non-condensing.

8 DC power supply has to meet the following requirements: power >50 W; ripple <5% peak-to-peak; line regulation <0.5%.

MECHANICAL SPECIFICATIONS

OBIS XT



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all OBIS XT Lasers. For full details of this warranty coverage, please refer to the Service section at www.coherent.com or contact your local Sales or Service Representative. MC-014-19-0M0619 Copyright ©2019 Coherent, Inc.