



# OBIS LG

## Highly Compact CW UV Lasers

The OBIS LG is a highly compact and reliable low-noise CW UV laser providing up to 50 mW at 355 nm, ideal for OEM instrumentation applications in flow cytometry, confocal microscopy, and semiconductor inspection.

Based on Coherent's unique Optically Pumped Semiconductor Laser (OPSL) technology, the OBIS LG produces a diffraction limited power-invariant beam with inherently low noise and high stability.

High reliability and robustness is further ensured by the use of Coherent's patented PermAlign™ technology for optimal alignment and solder-bonding of the optics.

Control electronics are integrated within the laser head to provide a "one-box integrated system" that is extremely compact for ease of integration.

Featuring superior performance and reliability within an industry-leading compact package, the OBIS LG is the ideal solution for your OEM instrumentation needs.

### FEATURES

- Up to 50 mW output power at 355 nm
- TEM<sub>00</sub> power-invariant beam
- Low noise
- PermAlign™ technology
- Integrated control electronics

### APPLICATIONS

- Flow Cytometry
- Confocal Microscopy
- Semiconductor Inspection



SPECIFICATIONS <sup>1</sup>	OBIS LG 355-20	OBIS LG 355-50
Wavelength (nm)	355 ±2	355 ±2
FWHM Linewidth (GHz)		<50
Pulse Format		CW
Spectral Purity (%)		>99
Output Power (mW)	>20	>50
Spatial Mode		TEM <sub>00</sub>
Beam Quality (M <sup>2</sup> )		<1.2
Beam Circularity <sup>2</sup>		1.0 ± 0.15
Beam Waist Diameter (mm) (FW, 1/e <sup>2</sup> )		<1.2
Beam Divergence (mrad) (FW, 1/e <sup>2</sup> )		<0.5
Beam Waist Location <sup>3</sup> (mm)		±500
Beam Pointing (mrad)		±<5.0
Beam Pointing Stability (μrad/°C)		<10
Beam Position Tolerance (mm)		
Horizontal		±<1.0
Vertical		±<1.0
Polarization Ratio		Linear, >100:1
Polarization Direction		Vertical, ±5°
Noise (% RMS) (10 Hz to 1 MHz)	<0.3	<0.25
Power Stability (%) (pk-pk)		±1
CDRH Compliant <sup>4</sup>		No
UTILITY REQUIREMENTS		
Operating Voltage (VDC)		24 ±10%
Power Consumption (W)		<150
Cooling Requirements	Heat sink required with <0.3°C/W thermal impedance, e.g., Coherent OBIS LG Air-Cooled Riser Option	
ENVIRONMENTAL CONDITIONS		
Ambient Temperature		
Operating		10 to 40°C (50 to 104°F)
Non-Operating		-10 to 60°C (-14 to 160°F)
Relative Humidity <sup>5</sup> (%)		5 to 95
MECHANICAL SPECIFICATIONS		
CE Marking	EN 61010-1, EN 60825-1, EN 61326-1 EN 55011, EN 50581	
Dimensions (L x W x H)		
Laser Head <sup>6</sup>	125.0 x 70.0 x 36.2 mm (4.9 x 2.76 x 1.43 in.)	
Power Supply <sup>7</sup> (AC/DC converter) (optional)	197.0 x 88.0 x 44.0 mm (7.76 x 3.46 x 1.73 in.)	
Cables (laser head to power supply <sup>7</sup> )	2m (6.5 ft.)	
Weight	581 g (1.28 lbs.)	

<sup>1</sup> Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.

<sup>2</sup> Circularity defined as vertical diameter divided by horizontal diameter.

<sup>3</sup> Negative value corresponds to a location inside the laser head.

<sup>4</sup> Ready to be integrated in compliant system.

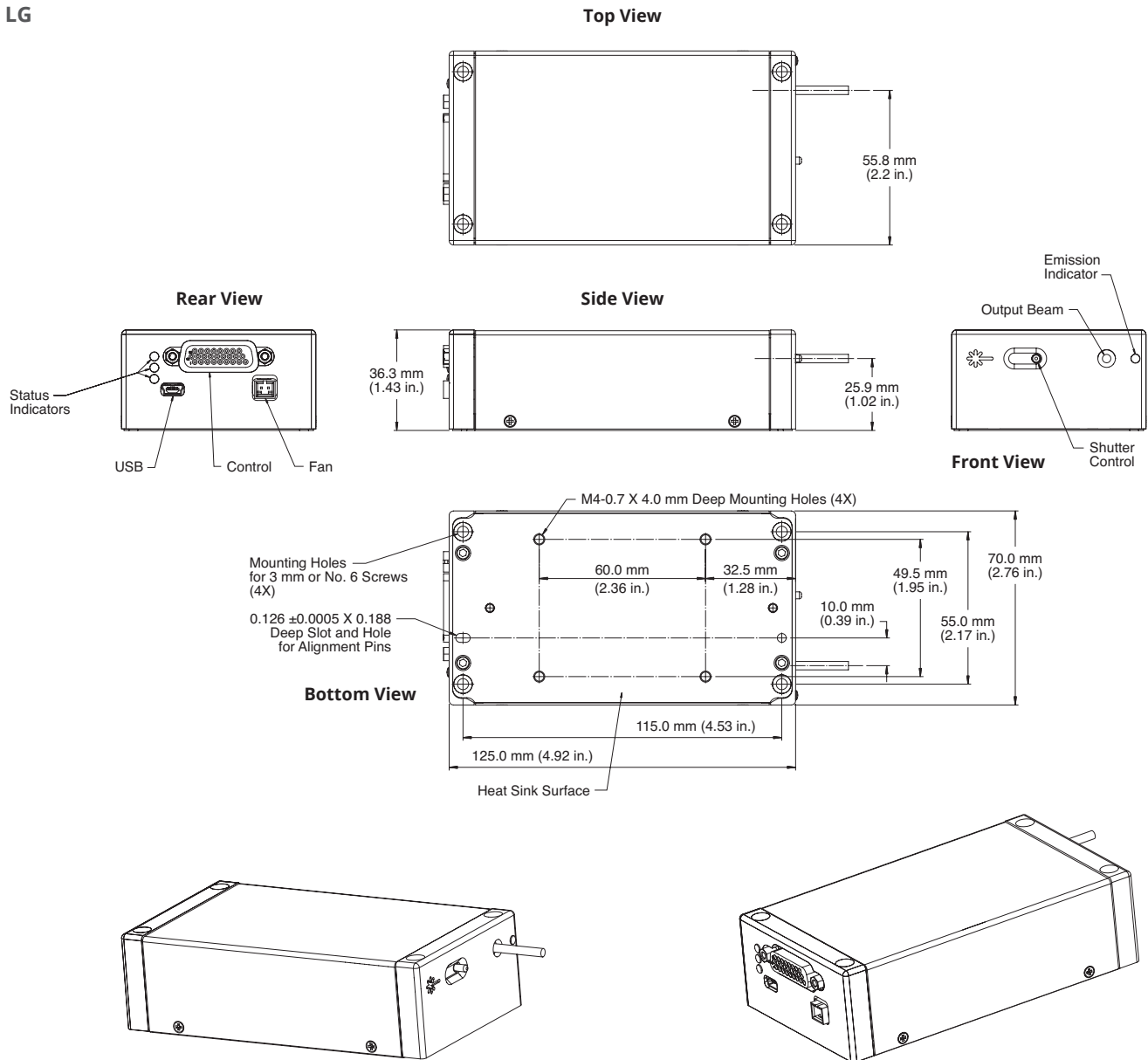
<sup>5</sup> Non-condensing.

<sup>6</sup> Back connector not included in laser head length dimension.

<sup>7</sup> Power supply not included.

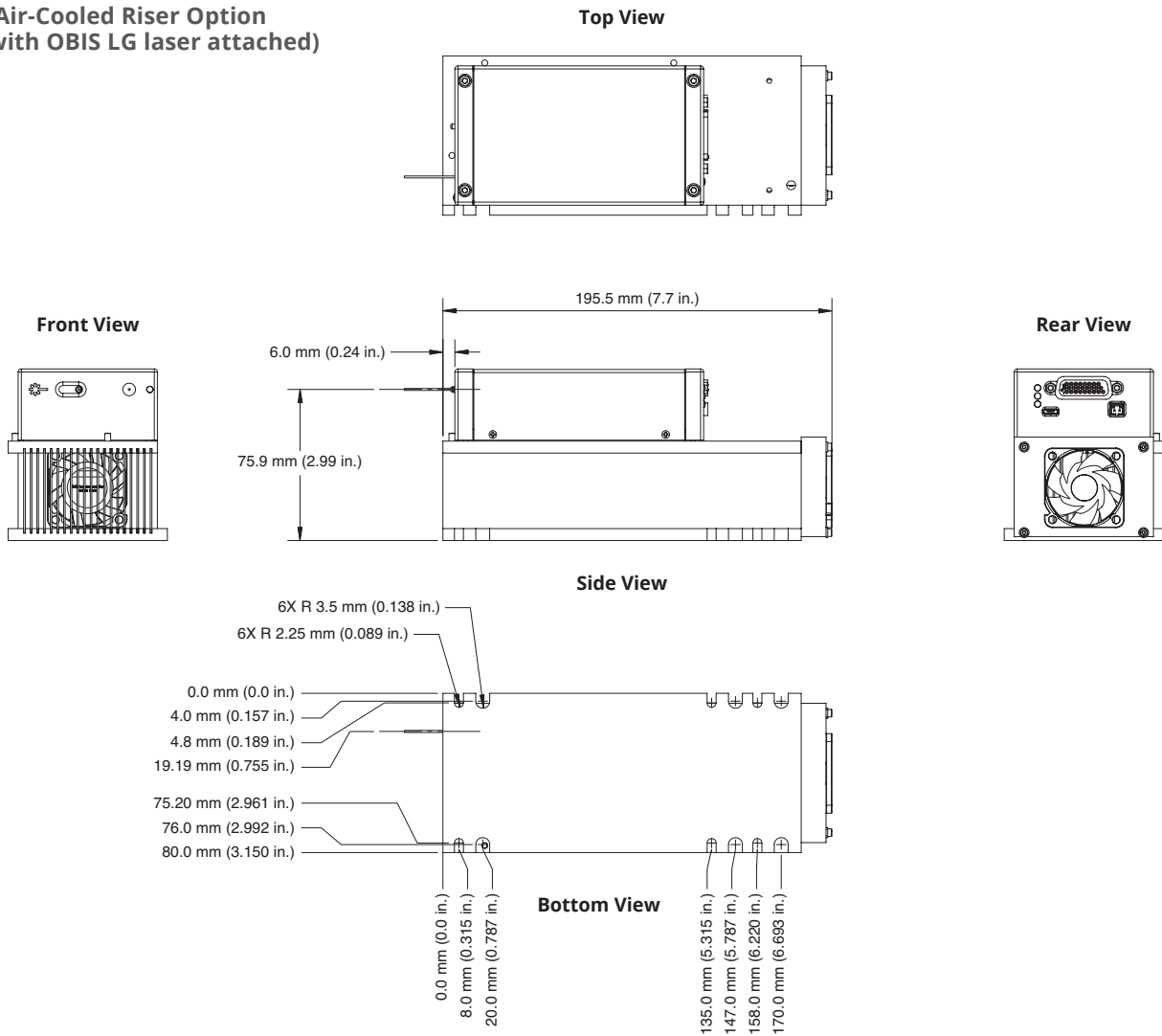
## MECHANICAL SPECIFICATIONS

### OBIS LG



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### OBIS LG Air-Cooled Riser Option (shown with OBIS LG laser attached)



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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 LG lasers. For full details of this warranty coverage, please refer to the Service section at [www.Coherent.com](http://www.Coherent.com) or contact your local Sales or Service Representative. Printed in the U.S.A. MC-003-17-0M0118Rev.B Copyright ©2018 Coherent, Inc.

