



# Azure

## Continuous-Wave Deep-UV Laser

Azure is a reliable, low noise, continuous wave laser system designed for an easy integration into an industrial environment. It emits at 266 nm wavelength with 230 mW output power. Azure is based on highly successful Verdi CW green laser. The single-frequency emission from Verdi is converted into 266 nm by using a high-efficiency resonant frequency doubling cavity.

This product is designed for a reliable hands-free 24/7 operation in an industrial environment. OEM design provides fully automated laser features including automatic cavity lock control, pump light coupling and stable output power control. Azure features calibrated alignment and automatically stabilised UV beam pointing. Combined with the rigid production testing procedures and excellent laser to laser consistency, this enables seamless laser replacement in user environment. The laser includes full remote control and laser data recording capabilities.

Laser stability combined with years of field-proven reliability enables optimised performance, maximum operational uptime and predictable cost of ownership. Based on Coherent's best industrial lasers practice, Azure enables high-throughput UV light processes.

### FEATURES

- 266 nm CW, ultra low noise
- Hands-free operation
- Full remote control
- Automated laser stability controls
- Long lifetime >6250 hours

### APPLICATIONS

- Semiconductor Inspection
- Grating Writing
- UV Spectroscopy
- Lithography

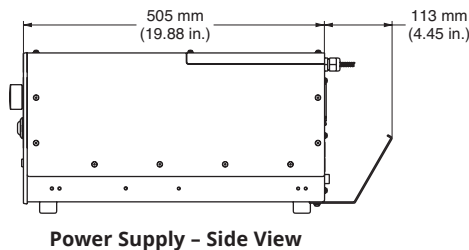
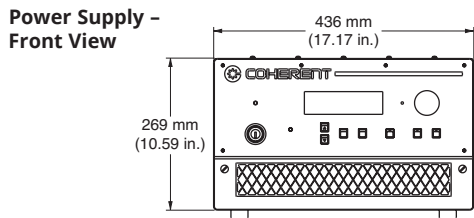
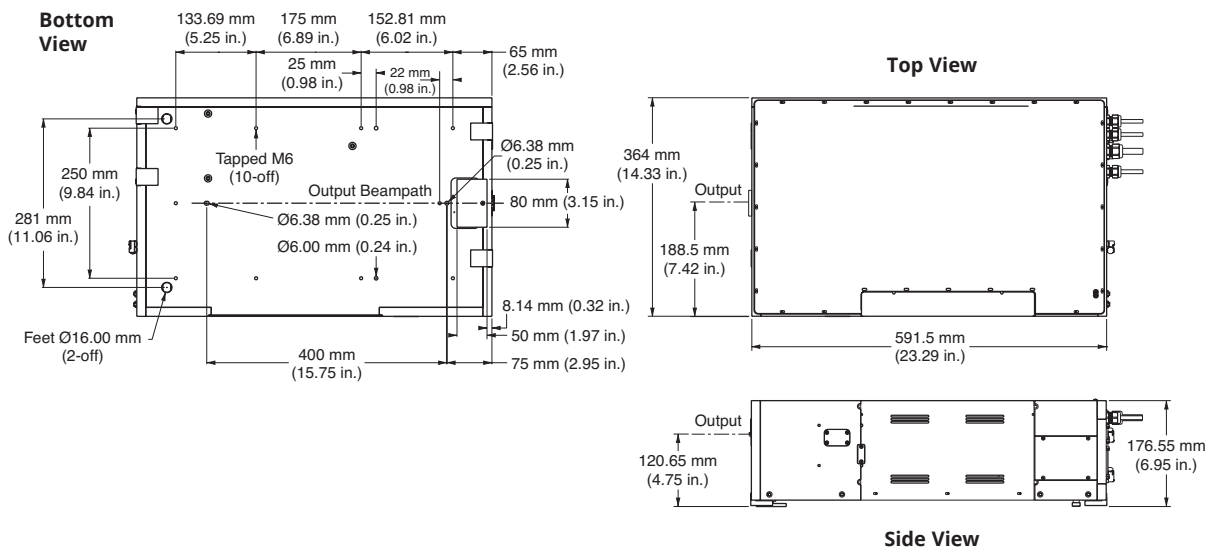


SPECIFICATIONS	Azure
Wavelength (nm)	266
Power (mW)	230
Specifications Satisfied at (mW)	100 to 230
Beam Waist Size Diameter (mm)	1.05 ±0.2
Beam Waist Location	Front bezel ±25% of Rayleigh range
Beam Divergence (mrad) (full-angle)	<0.42
Ellipticity	0.9 to 1.1
Astigmatism	±25% of Rayleigh range
Pointing Stability (µrad/°C)	±5
Transverse Modes/Beam Profile	TEM <sub>00</sub> , M <sup>2</sup> <sub>x</sub> <1.3, M <sup>2</sup> <sub>y</sub> <1.3
Polarization	Vertical, linear, 200:1
Output Power Stability	<1% over 8 hours
RMS Noise	<0.3% between 10 Hz and 100 MHz
Peak-to-Peak Noise	1.5% for 1 sec. between 10 Hz and 100 MHz
Warm-Up Time <sup>1</sup>	
Cold Start (hours)	<2
From Standby (minutes)	<5
From Crystal Shift (minutes)	<2
Cool-Down Time (minutes)	45
UTILITY AND ENVIRONMENTAL REQUIREMENTS	
Head	
Dimensions (L x W x H)	592 x 364 x 177 mm (23.3 x 14.4 x 7.0 in.)
Weight	48 kg (105.6 lbs.)
Umbilical Length	3.8 m (12.5 ft.)
Power Supply	
Dimensions (L x W x H)	505 x 436 x 269 mm (19.9 x 17.2 x 10.6 in.)
Weight	31.5 kg (69.3 lbs.)
Chiller	
Dimensions (L x W x H)	436 x 210 x 393 mm (17.2 x 8.3 x 15.5 in.)
Weight	17.5 kg (38.6 lbs.)
MRU (Miniature Recirculator Unit)	
Dimensions (L x W x H)	451 x 479 x 95 mm (17.8 x 18.9 x 3.7 in.)
Weight	10.0 kg (26.5 lbs.)
Operating Thermal Requirements	+15 to +30°C operating, stabilized to ±2°C in a non-condensing environment
Laser Head	Closed-loop chiller for baseplate
Power Supply	Air-cooled
Shipping Thermal Requirements	-20 to +50°C shipping in a non-condensing environment
Orientation	Horizontal ±2°
Power Supply (VAC)	100 to 240
Azure Power Consumption (kW)	1
Chiller Power Consumption (kW) (max.)	0.6
Computer Interface	RS-232

<sup>1</sup> Defined as time to meet specifications (power, pointing stability, noise, etc.).

## MECHANICAL SPECIFICATIONS

### Azure



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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 Azure 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.  
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