



# MBD 266

## Single Frequency Deep UV Source

MBD 266 system is all-solid-state, continuous wave, single frequency, deep-UV source at 266 nm. Stable, low-noise operation results from frequency doubling of the 532 nm output from Verdi pump laser.

MBD 266 uses resonant cavity frequency doubling technique for high-efficiency UV generation. The complete packaged source of 266 nm light comes with frequency doubling unit, electronic control unit, Verdi pump laser and closed loop thermoelectric chiller. Both Verdi pump laser and frequency doubling unit are clamped on a single optical breadboard which eliminates thermomechanical instabilities and ensures robust operation. Integrated second harmonic generation crystal shifter allows to maximize the life-time of the system.

This efficient deep-UV source is highly advantageous for applications like semiconductor wafer inspection, lithography, grating writing, circuit board testing, UV spectroscopy and others. Please also enquire about options at different UV wavelengths enabled by Coherent Genesis laser systems.

### FEATURES

- Unique mechanical resonator
- Enhanced output power
- Precision crystal adjustment
- High efficiency frequency doubling
- MBD E-200 servo-control unit
- Efficient doubling of single frequency enabled by Verdi™
- Integrated Verdi pump laser
- Adjustable crystal shifter

### APPLICATIONS

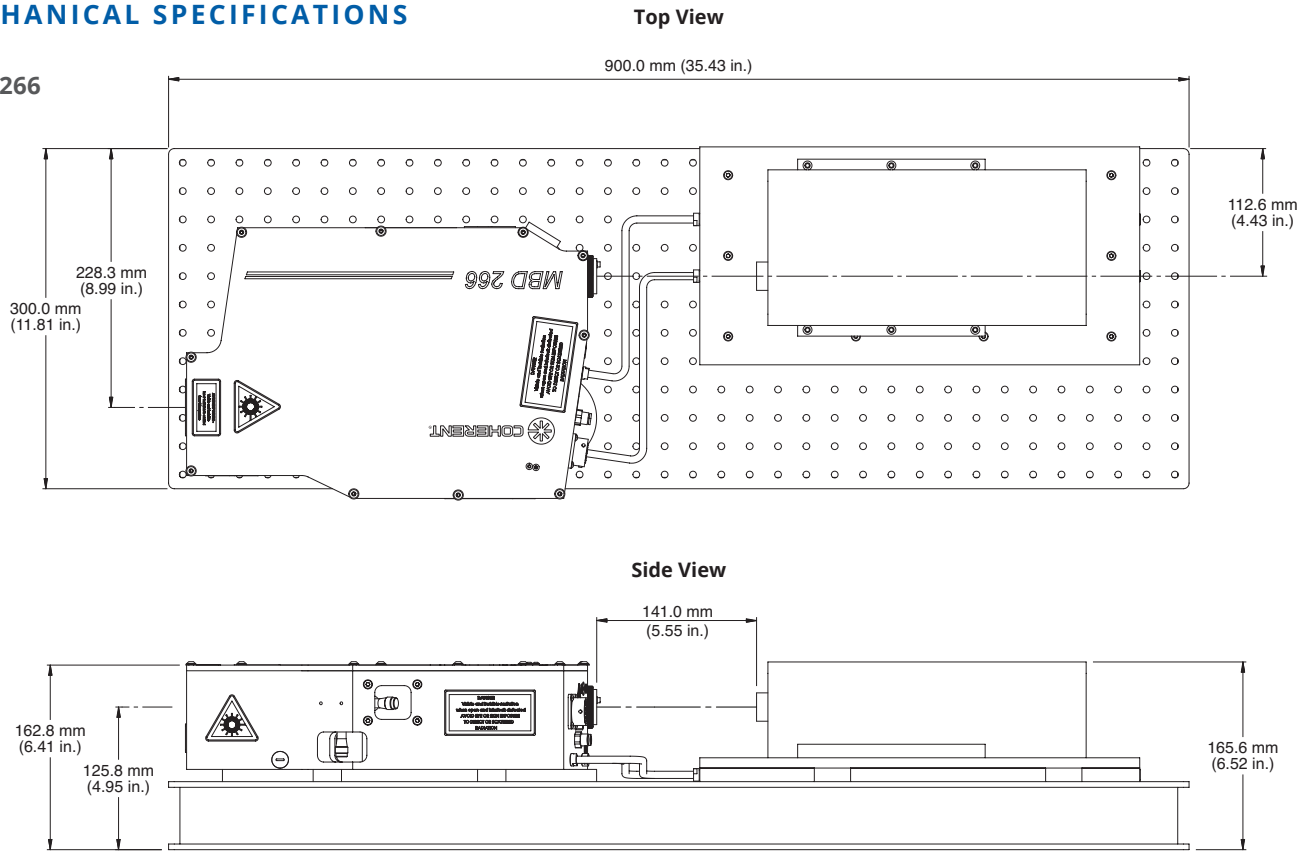
- Semiconductor Wafer Inspection
- Lithography
- Grating Writing
- Circuit Board Testing
- UV Spectroscopy



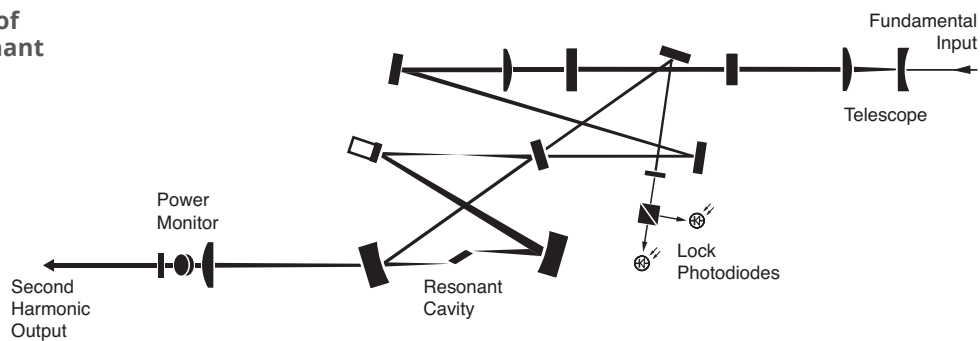
SPECIFICATIONS		MBD 266
Pump		Verdi-2W
Output Power (mW)		>200
Wavelength (nm)		266
Linewidth (MHz)		<10
Power Stability (%)		±2 (over 2 hours, after 15-minute warm-up from standby)
Noise (%) (rms)		<0.5 (in 4 Hz to 20 MHz detection bandwidth)
TYPICAL BEAM PARAMETERS		
Beam Diameter (mm)		0.8 ±10%
Beam Divergence (mrad)		0.5 x 0.6 ±10%
M <sup>2</sup>		<1.1 x 1.3
UTILITY AND ENVIRONMENTAL REQUIREMENTS		
Operating Voltage (VAC)		90 to 250
Max. Current (A)		15.5 at 85 VAC
Power Consumption (kW)		1.3 maximum
Frequency (Hz)		47 to 63
Umbilical Length		3m
Cooling		
Optical Head		Closed-cycle chiller (supplied)
Power Supply		Air-cooled
Operating Temperature Range		15 to 30°C ambient
Dimensions (L x W x H)		
Laser Head – Optical Breadboard with Verdi G2 Head and MBD-266 Module		900 x 300 x 166 mm (35.4 x 11.8 x 6.5 in.)
Verdi Power Supply		360 x 229 x 160 mm (14.2 x 9.0 x 6.3 in.)
MBD-266 Control Unit		325 x 270 x 160 mm (12.8 x 7.9 x 6.3 in.)

**MECHANICAL SPECIFICATIONS**

MBD-266



**Optical Schematic of the MBD-200 Resonant Frequency Doubler**



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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 MBD systems. 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-SC007-99-0M0217Rev.D Copyright ©2017 Coherent, Inc.

