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

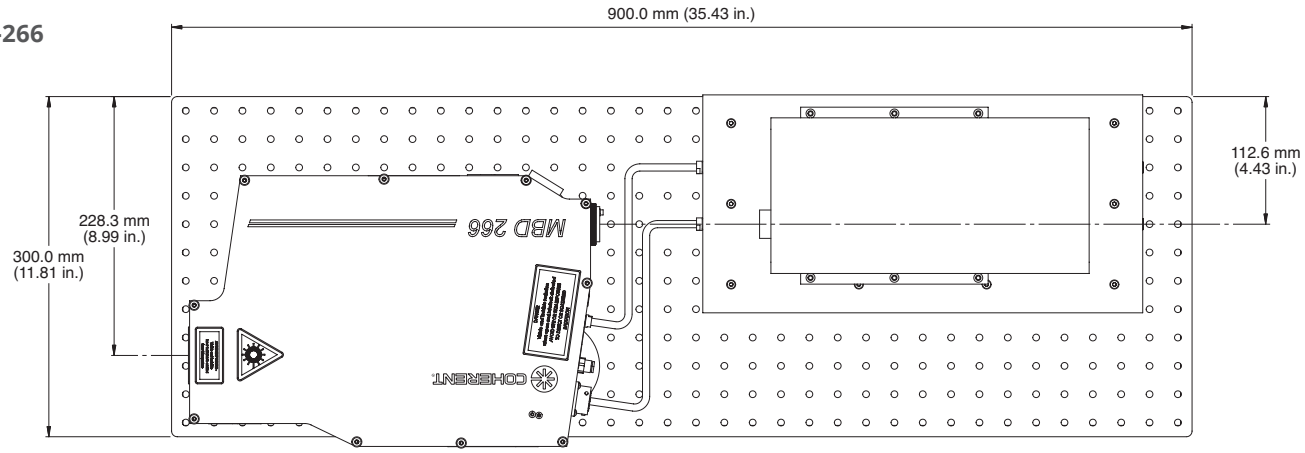
COHERENT®
Superior Reliability & Performance

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^2	<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 Power Supply	 Closed-cycle chiller (supplied) 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 Verdi Power Supply MBD-266 Control Unit	 900 x 300 x 166 mm (35.4 x 11.8 x 6.5 in.) 360 x 229 x 160 mm (14.2 x 9.0 x 6.3 in.) 325 x 270 x 160 mm (12.8 x 7.9 x 6.3 in.)

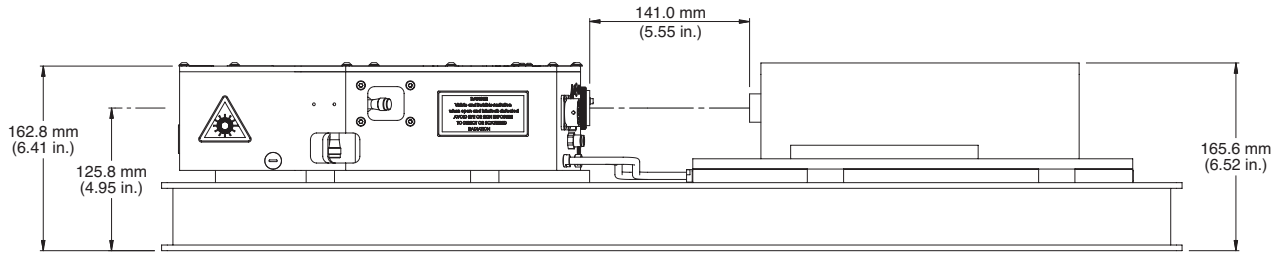
MECHANICAL SPECIFICATIONS

MBD-266

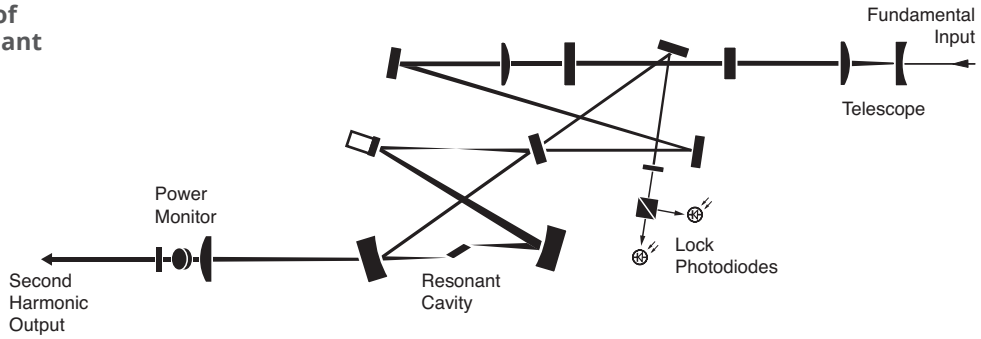
Top View



Side View



Optical Schematic of the MBD-200 Resonant Frequency Doubler



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