



MID-IR-2

RF-Excited Frequency-Doubled CO₂ WaveGuide Laser

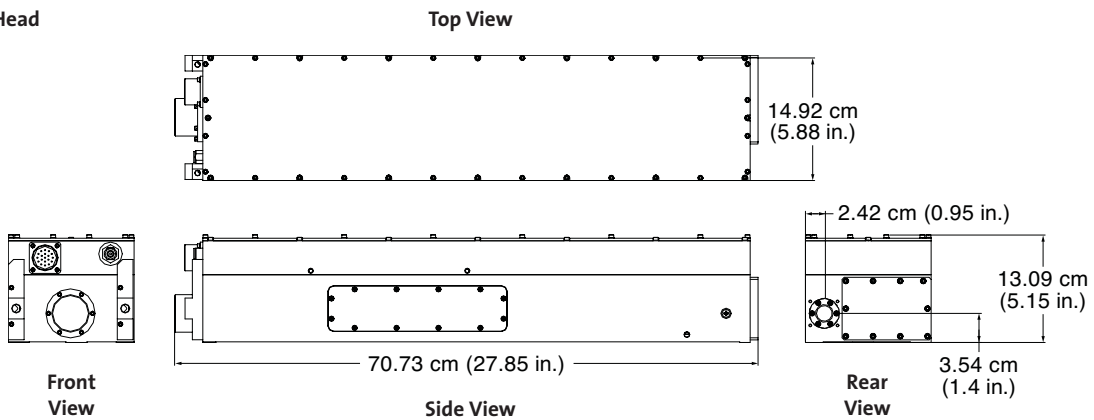
Features

- Pulse width to <12 nsec
- Adjustable pulse rate – single shot to 100 kHz
- Grating selected fixed wavelength
- Outstanding beam quality and stability
- Internal/external trigger capability
- Cavity-tuning PZT
- Compact size and rugged construction
- RF supply integrated in system controller



Mechanical Specifications

Laser Head



Superior Reliability & Performance

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System Specifications

Wavelength (μm)	4.6
Rated Power @ 4.6 μm (W)	2 @ 100 kHz PRF
Peak Power @ 9.3 μm (kW)	>1.2
Pulse Width (nsec)	<12
Pulse Rate	0 Hz to 100 kHz
Beam Diameter (1/e ²)	1.8 ±0.2 mm
Beam Divergence ¹	4.0 ±1.0 mrad Full Angle
Beam Quality	M ² <1.3
Polarization	Fixed Linear, Parallel to Baseplate
Modulation Control	TTL up to 100 kHz
Weight of Laser Head	16 kg (35 lbs.)
Weight of C/PS Module	16 kg (35 lbs.)
Laser Head	70.73 x 14.92 x 13.09 cm (27.85 x 5.88 x 5.15 in.)
C/PS Module Dimensions	180 x 480 x 480 mm (7 x 19 x 19 in.)

Input Requirements

Prime Power	200 to 240 VAC, 50 to 60 Hz, 7A max.
Cooling	
Heat Load (W, max.)	1200
Flow Rate (gpm)	>1.5
Temperature	15 to 30°C (59 to 86°F)
Coolant	Water +25% Dow Frost ² Coolant
Environmental	
Temperature	15 to 45°C (59 to 86°F)
Altitude	<2000m (6500 ft.)
Humidity	Non-condensing

¹ Performance depends on operating conditions, and may vary from system to system.

² Dow Frost is a trademark of the Dow Chemical Company.

Specifications are subject to change without notice.

Protected under Coherent-owned U.S. patents: 4,787,090, 4,577,323, 4,443,877, 4,438,514, 4,393,1262 and 5,680,412; other patents pending. Licensed by PATLEX Corp. under U.S. Patent 4,704,583.

Coherent, Inc. warrants to the original purchaser for a period of one year from the date of delivery that the MID-IR-2 is free from defects in material and workmanship. The warranty does not apply to any unit damaged by accident, abuse or operation in a manner inconsistent with the procedures and specifications outlined in the manual supplied with the laser.

The MID-IR-2 is a laser component that does not include all safety features as required by the FDA and Center for Devices and Radiological Health (CDRH). It is sold solely to qualified manufacturers who in their end product will supply all interlocks and indicators, and will comply fully with CDRH regulations and/or local regulatory agencies.



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