

DIAMOND G-100

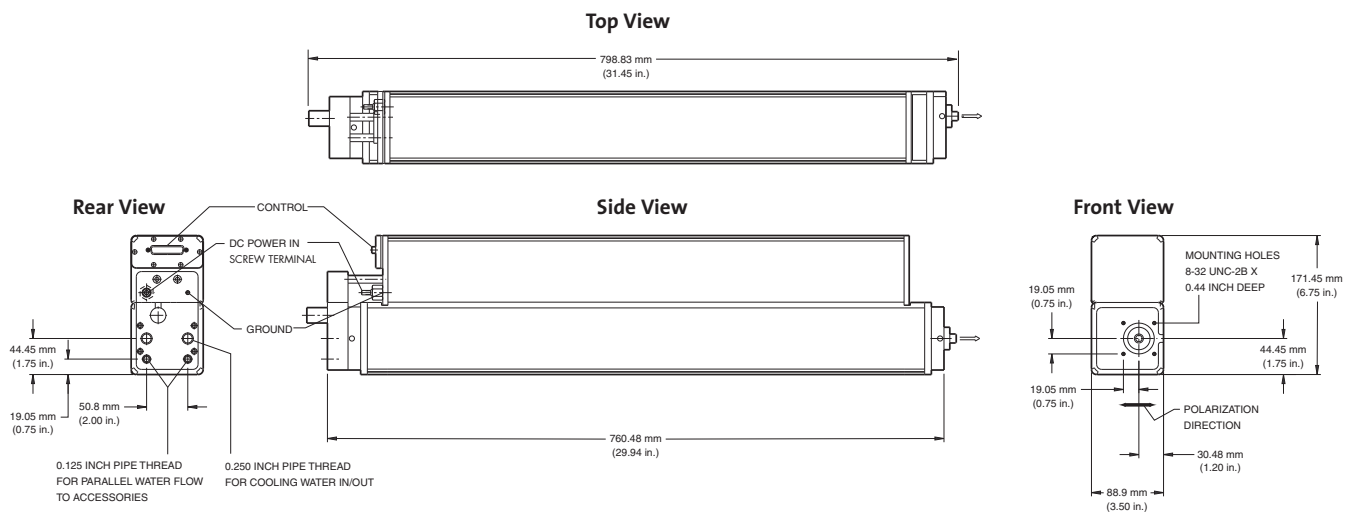
Liquid-Cooled, RF-Excited OEM Industrial CO₂ Laser

Features

- Wide operating power range
- Power <250W
- Pulse frequency from single shot to 100 kHz
- Fast rise-and-fall time
- Excellent power stability
- Low-cost OEM configuration
- Integrated RF power supply
- Compact design



Mechanical Specifications



Superior Reliability & Performance

DIAMOND™ G-100

Liquid-Cooled, RF-Excited OEM Industrial CO₂ Laser

System Specifications	Output Power ¹ (W)	100
	M ²	<1.5 (K >0.67)
	Power Range (W)	10 to 100
Typical Performance	Pulse Frequency (kHz)	0 to 100
	Peak Effective Power (W)	5 to 200
	Pulse Energy Range (mJ)	<90
	Pulse Rise & Fall Time (µsec)	±10
	Power Stability ² (%)	<200
	Beam-Pointing Stability ³ (µrad)	<1.5:1
	Beam Ellipticity ⁴	2.3 ±0.4
	Beam Diameter ⁴ (1/e ²)(mm)	<11.0
	Beam Divergence ⁴ (Full-Angle)(mrad)	10.2 to 10.7
	Wavelength ⁵ (µm)	Linear >100:1
	Polarization (Parallel to Narrow)	48 ±1%
Electrical Requirements	DC Input Voltage (VDC)	50 rms, 100 peak
	Max. DC Current (A)	
	Electrical input requirements for DC supply	
Water	Single Phase Voltage (V)	200 to 240
	Single Phase Current (A)	15, 50 to 60 Hz, Power factor corrected
	Cooling Water Flow Rate	1.5 gal/min., 5.7 l/min.
	Cooling Water Temperature Range	10 to 35°C (50 to 95°F)
Environmental Conditions	Water Hardness (equiv. CaCO ₃)	<250 mg/l
	Water Pressure	30 to 75 psi, 205 to 520 kPa
	Ambient Temperature	5 to 40°C (41 to 104°F)
Weight	Relative Humidity ⁵	<95%, non-condensing
	Altitude	<2000 m (<6600 ft.)
	Laser	15.9 kg (35 lbs.)

All specifications subject to change without notice. Coherent, Inc. warrants to the original purchaser for a period of two years from the date of shipment that the DIAMOND G-100 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 DIAMOND G-100 is a laser component that does not include all safety features as required by the FDA and the 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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