



Verdi IR

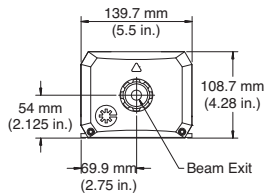
Diode-Pumped Solid-State Lasers, High-Power CW Output at 1064 nm



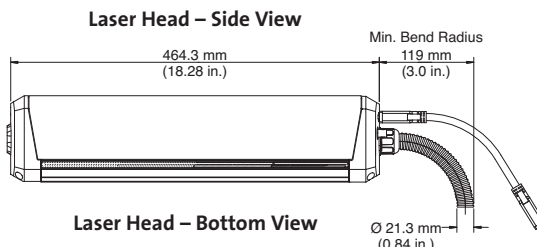
Features

- Single-longitudinal-mode output
- Optical noise <0.04% RMS measured from 10 Hz to 1 GHz
- Mode hop-free operation from 15W to 25W
- Ultra-long-life AAA™ (Aluminum-free Active Area) laser diode material
- PermAlign™ solder-bonded optics technology
- PZT for >3.2 GHz frequency tuning and narrow linewidth
- Best pointing stability (<2 μ rad/°C)

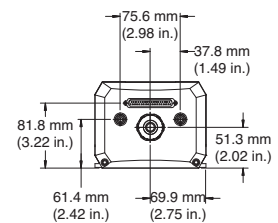
Mechanical Specifications



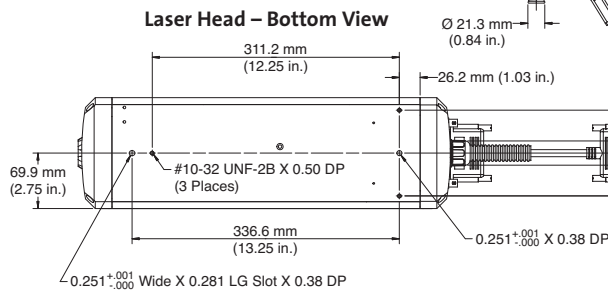
Laser Head – Front View



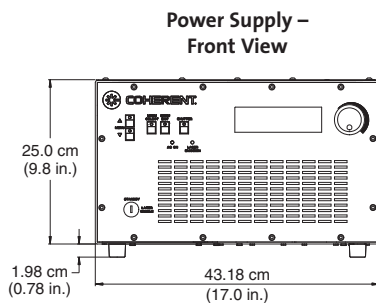
Laser Head – Side View



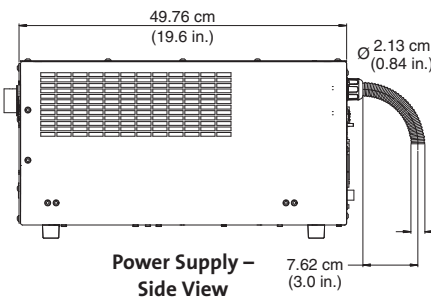
Laser Head – Rear View



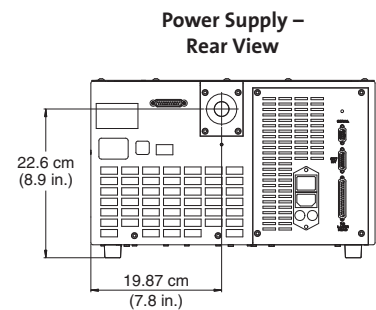
Laser Head – Bottom View



Power Supply – Front View



Power Supply – Side View



Power Supply – Rear View

Superior Reliability & Performance

Verdi™ IR

Diode-Pumped Solid-State Lasers, High-Power CW Output at 1064 nm

System Specifications

Verdi IR	IR25
Output Power (W)	>25
Wavelength (nm)	1064
Linewidth ¹ (MHz)	<2.5 (over 50 ms)
Beam Diameter ² (mm)(1/e ²)	3.20 ±10%
Beam Divergence ³ (mrad)(full-angle)	<0.5
M ²	<1.1
Pointing Stability ⁴ (μrad/°C)	<2
Power Stability ⁵ (%) (2 hours)	±1
Noise ⁶ (rms)	<0.04 (10 Hz to 1 GHz)
Polarization	vertical, >100:1
Operating Voltage (VAC)	100 to 240
Frequency (Hz)	50/60
Max. Operating Current (A)(@ 100 VAC)	13
SLM Operation (W)(mode-hop free after warm-up)	15.0 to 25.0
PZT Input Voltage (V/channel)	0 to +100
PZT Tuning Range (GHz)	>3.2
PZT Bandwidth	DC to 20 kHz
Power Consumption	
Maximum (kW)	1.3
Typical (W)	900
Number of Diodes (FAPs)	2
Cooling Requirements	
Laser Head	Closed-loop, water cooling
Power Supply	Air-cooled
Range of Operating Temperature	
Laser Head	15 to 45°C (59 to 113°F)
Power Supply	15 to 35°C (59 to 95°F)
Weight	
Laser Head	8 kg (18 lbs.)
Power Supply	33 kg (73 lbs.)
Length of Umbilical	3 m (10 ft.)
Diameter of Umbilical	2.15 cm (0.85 in.)

¹ Measured over 50 msec with a thermally stabilized reference etalon at maximum specified output power.

² 1/e² and located within ~0.5 m of the exit port.

³ Full angle divergence.

⁴ Measured as far-field x and y positions over a 25°C to 35°C temperature change.

⁵ Measured over 2 hours after a 15 minute warm-up.

⁶ Measured from 10 Hz to 1 GHz.

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 Verdi systems. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.



www.Coherent.com

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