



Verdi V8, V10

Diode-Pumped Solid-State Lasers, High-Power CW Output at 532 nm

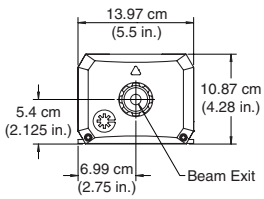


Features

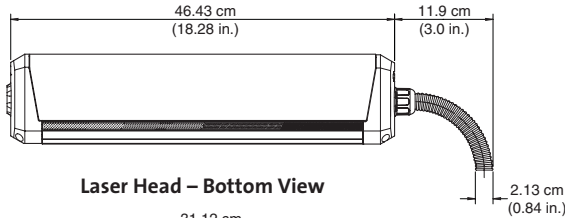
- Single-longitudinal-mode output
- Optical noise <math>< 0.03\%</math> RMS measured from 10 Hz to 1 GHz
- Superior diode-to-green conversion efficiency (>25%)
- Ultra-long-life AAA™ (Aluminum-free Active Area) laser diode material
- PermAlign™ solder-bonded optics technology
- Sealed laser head

Mechanical Specifications

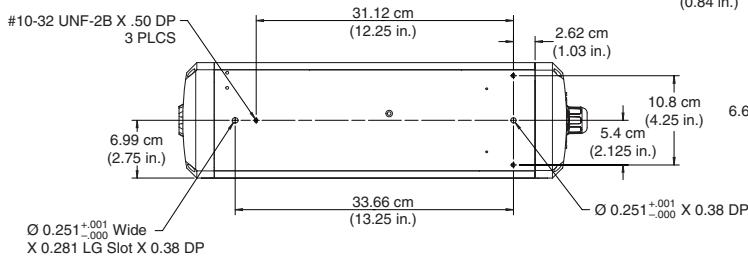
Laser Head – Front View



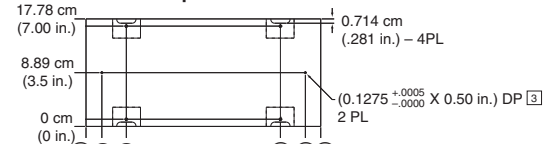
Laser Head – Side View



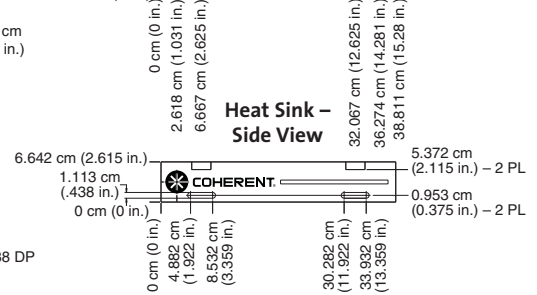
Laser Head – Bottom View



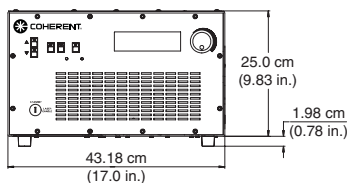
Heat Sink – Top View



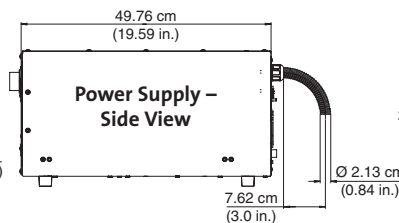
Heat Sink – Side View



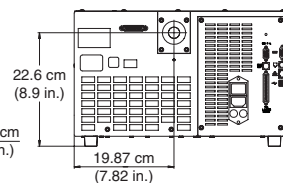
Power Supply – Front View



Power Supply – Side View



Power Supply – Rear View



Superior Reliability & Performance

Verdi™ V8, V10

Diode-Pumped Solid-State Lasers, High-Power CW Output at 532 nm

System Specifications

| | Verdi V8 | Verdi V10 |
|---|------------------|-----------|
| Output Power (W) | >8 | >10 |
| Wavelength (nm) | 532 | |
| Linewidth ¹ (MHz) | <5 | |
| Beam Diameter ² (mm) | 2.25 ±10% | |
| Beam Divergence ³ (mrad) | <0.5 | |
| M ² | <1.1 | |
| Pointing Stability ⁴ (μrad/°C) | <2 | |
| Power Stability ⁵ | ±1% | |
| Noise ⁶ (RMS) | <0.03% | |
| Polarization | Vertical, >100:1 | |

Utility and Environmental Requirements

| | | |
|-----------------------------------|-----------------------------|-------------|
| Operating Voltage (VAC) | 100 to 240 | |
| Operating Current (A) | 7.8 max. @ 100 VAC | |
| Power Consumption (W) | 780 maximum | 420 typical |
| Frequency (Hz) | 380 typical | 50 to 60 |
| Laser Head Cooling Requirements | Closed-loop water cooling | |
| Power Supply Cooling Requirements | Air-cooled | |
| Range of Operating Temperature | 15°C to 35°C (59°F to 95°F) | |
| Weights | | |
| Laser Head | 8 kg (18 lbs.) | |
| Power Supply | 27 kg (59 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 ±0.5m of the exit port.

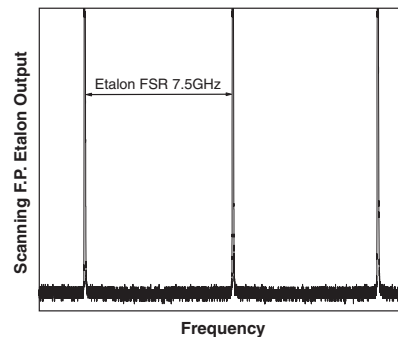
³ Full-angle divergence.

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

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

⁶ Measured from 10 Hz to 1 GHz.

Verdi Single-Longitudinal-Mode Operation



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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