



Vitesse 800

Diode-Pumped Solid-State Ultrafast Laser



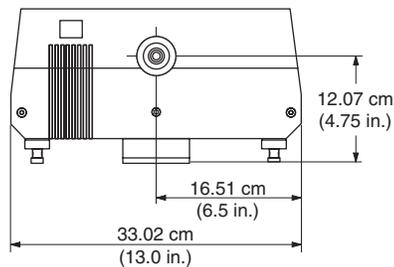
Features

- Compact femtosecond Ti:S oscillator
- Ultra-long-life Aluminum-free Active Area (AAA™) laser diode material
- PowerTrack™ active optimization
- Integrated Verdi™ pump source
- PermAlign™ solder-bonded optics technology
- Rugged, turnkey, hands-off operation
- Ideal for scientific or OEM environments
- Dual output beams (532 nm and 800 nm) version available – Vitesse-Duo

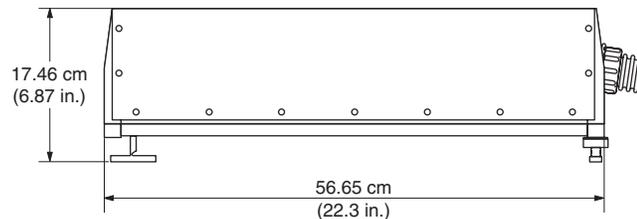
Mechanical Specifications

Laser Head

Front View

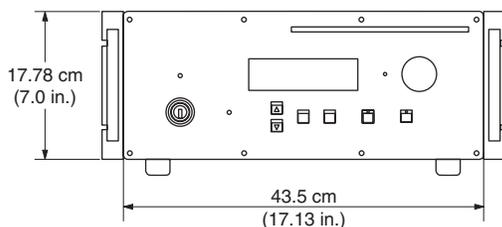


Side View

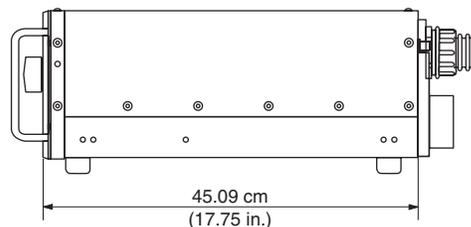


Power Supply

Front View



Side View



Superior Reliability & Performance

Vitesse™ 800

Diode-Pumped Solid-State Ultrafast Laser

System Specifications

	Vitesse 800-2	Vitesse 800-5	Vitesse Duo-10 ¹⁰
Average Power (mW)	>200	>750	>100
Wavelength ¹ (nm)	800	800	800
Bandwidth ² (nm)	>10	>10	>10
Pulsewidth ³ (fs)	<100	<100	<100
Repetition Rate ⁴ (MHz)	80	80	80
Power Stability ⁵ (%)	±1	±1	±1
Noise ⁶ (%) (RMS)	<0.1	<0.1	<0.1
Beam Diameter ⁷ (mm)	1.25	1.45	1.25
Beam Divergence ⁸ (mrad)	<1.2	<1.1	<1.4
M ²	<1.2	<1.2	<1.2
Polarization	>100:1, horizontal	>100:1, horizontal	>100:1, horizontal

Power Supply

Voltage (V)	90 to 250
Current Max. (A)	15.5 @ 85VAC
Frequency (Hz)	47 to 63
Cooling ⁹	Conductively-cooled to a heat sink with a closed-cycle chiller

¹ Nominal center wavelength ±1 nm.

² Full width at half maximum.

³ Based on sech² deconvolution of 0.65 times autocorrelation width.

⁴ Nominal repetition rate ±0.8 MHz.

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

⁶ Measured from 10 Hz to 10 MHz.

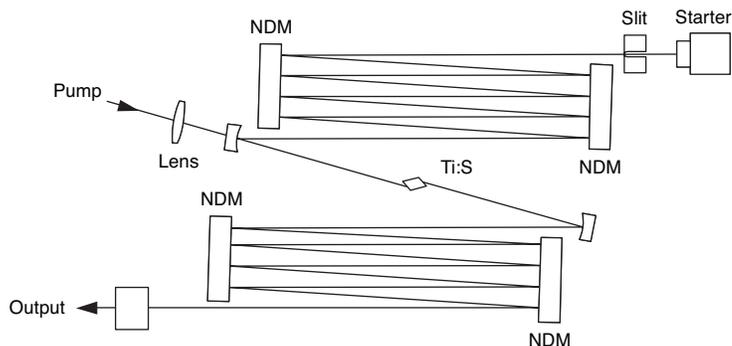
⁷ 1/e² at exit port, nominal beam diameter ±0.5 mm.

⁸ Full angle (1/e²).

⁹ Dependent on operational environment.

¹⁰ The Vitesse-Duo is a special configuration of the Vitesse that serves as an integrated seed and pump source for Coherent's RegA 9000/9050 regenerative amplifier. It has dual output beams at 532 nm and 800 nm.

Laser Cavity Schematic



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 Vitesse 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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