Chameleon Vision

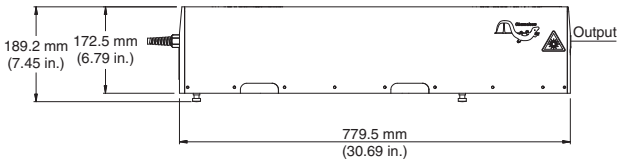
Widely Tunable, Single Box Precompensation, Hands-Free, Modelocked Ti:S Laser

Features

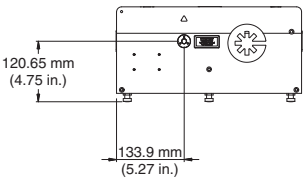
- Hands-free operation
- Sealed maintenance-free design
- Ultrawide tuning range (400 nm)
- Automated dispersion precompensation in a single box
- Fully-controllable dispersion precompensation down to 0 at all wavelengths
- High output power (up to >2.5W)
- Ultra wide dispersion compensation range from 0 to >47,000 fs²
- Tuning above 920 nm provided by MRU air recirculator (included)
- Simple menu-driven GUI or RS-232 operator interface for laser and precompensation features
- PowerTrack™ active alignment for long-term stability
- On-board spectrometer with simple USB interface shows wavelength

Mechanical Specifications

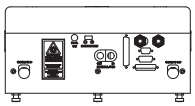
Laser Head – Side View



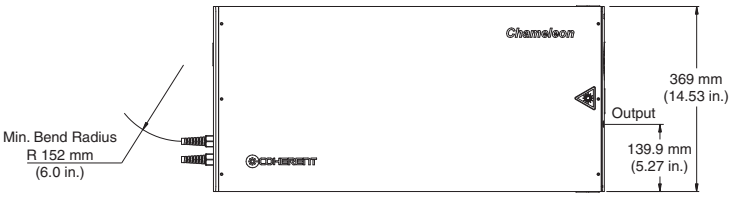
Laser Head – Front View



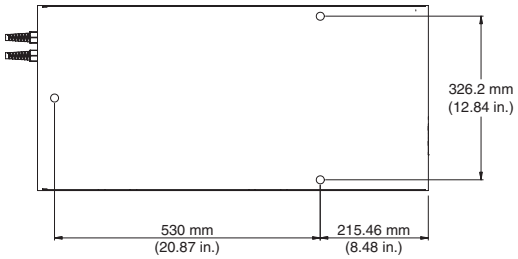
Laser Head – Rear View



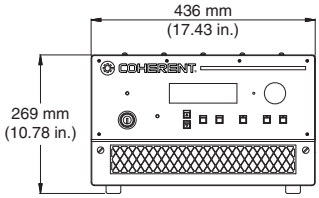
Laser Head – Top View



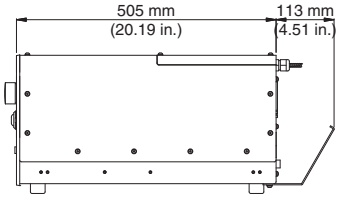
Laser Head – Bottom View



Power Supply – Front View



Power Supply – Side View



Superior Reliability & Performance

Chameleon™ Vision

Widely Tunable, Single Box Precompensation, Hands-Free, Modelocked Ti:S Laser

System Specifications

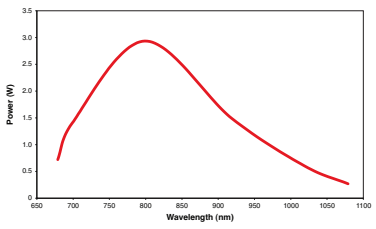
	Vision I	Vision II
Tuning Range (nm)	690 to 1040	680 to 1080
Power Specifications	640 mW @ 690 nm 1.04 W @ 710 nm 2.1W @ 800 nm 920 mW @ 920 nm 260 mW @ 1040 nm	425 mW @ 680 nm 1.1W @ 700 nm 2.5W @ 800 nm 1.1W @ 920 nm 400 mW @ 1020 nm 150 mW @ 1080 nm
Dispersion Compensation Range	0 to 43,000 fs^2 @ 690 nm 0 to 22,000 fs^2 @ 800 nm 0 to 9,500 fs^2 @ 1040 nm	0 to 47,000 fs^2 @ 680 nm 0 to 22,000 fs^2 @ 800 nm 0 to 10,000 fs^2 @ 1020 nm 0 to 9,000 fs^2 @ 1080 nm
Tuning Speed[2] (nm/s)	>35	>40
Pulse Width[1,3] (fs)	140	
Noise[1,4] (%)	<0.15	
Output Power Stability[1,5]	<±0.5	
Spatial Mode[1]	TEM_{00}	
Beam Diamater[1,6] (mm)	1.2 ±0.2	
Beam Ellipticity[1,7]	0.9 to 1.1	
Astigmatism[1] (%)	<10	
Repetition Rate (MHz)	80	
Polarization	Horizontal >500:1	
Pointing (µrad/nm)	<100/100	

Utility and Environmental Requirements

Operating Voltage (VAC)	90 to 250 (auto ranging)
Maximum Operating Current (A)	<15 at 90 VAC (power supply) <7 at 90 VAC (chiller) <2 at 90 VAC (MRU x1)
System Power Consumption (W)	2300 max., 1300W typical
Line Frequency (Hz)	47 to 63
Operating Temperature Range	15 to 35°C (59 to 95°F)
Weight of Laser Head	52 kg (115 lbs.)
Weight of Power Supply	41 kg (90 lbs.)
Umbilical Length	3 m (10 ft.)
Chiller:	
Dimensions (L x W x H)	27 x 20 x 38 cm (11 x 8 x 15 in.)
Weight	11 kg (25 lbs.)
MRU Air Recirculator:	
Dimensions (L x W x H)	46 x 43 x 8.5 cm (18 x 17 x 3 in.)
Weight	9 kg (20 lbs.)

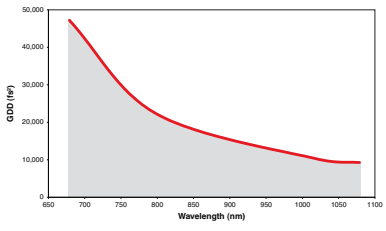
[1] Specified at peak of tuning range.
[2] Average speed measured over entire tuning range.
[3] Based on $sech^2$ deconvolution of 0.65 times autocorrelation width.
[4] Measured RMS in a 10 Hz to 20 MHz bandwidth.
[5] Power drift in any two-hour period with less than ±1°C temperature change after a one-hour warm-up.
[6] $1/e^2$ at exit port.
[7] Ratio of major to minor $1/e^2$ beam diameter at exit port.

Chameleon Vision II Typical Tuning Curve



Maximum Negative Dispersion Capability

The shaded region represents the range of dispersion values obtainable from the Vision



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 Chameleon 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.

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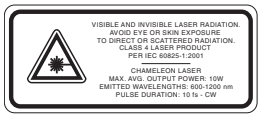

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