Chameleon Ultra Family

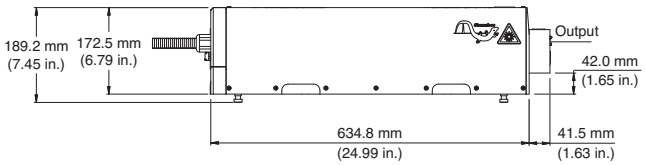
Widely Tunable, Hands-Free, Modelocked Ti:Sapphire Lasers

Features

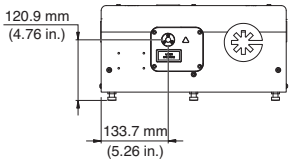
- Hands-free operation
- Sealed maintenance-free design
- Ultrawide tuning range (up to 400 nm)
- High output power (up to >3.5W)
- High peak power (>300 kW)
- Pulse width optimized for minimal broadening in MPE microscope systems
- Ready for Chameleon OPO wavelength extension up to 1600 nm
- Ready for Chameleon PreComp module for negative dispersion
- Simple menu-driven GUI or RS-232 operator interface
- PowerTrack™ active alignment for long-term stability
- On-board spectrometer with simple USB interface shows wavelength

Mechanical Specifications

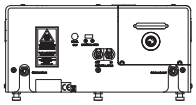
Laser Head – Side View



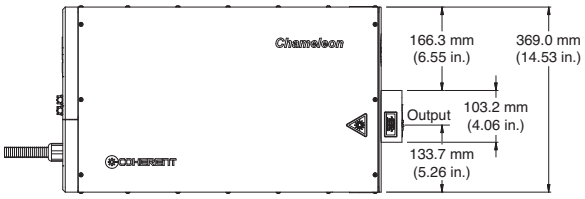
Laser Head – Front View



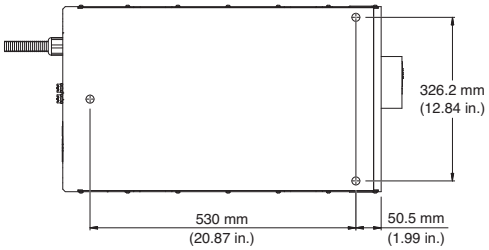
Laser Head – Rear View



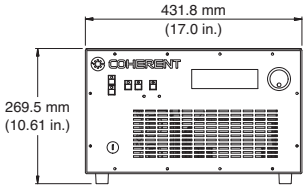
Laser Head – Top View



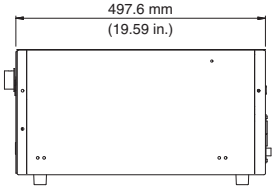
Laser Head – Bottom View



Power Supply – Front View



Power Supply – Side View



Superior Reliability & Performance

Chameleon™ Ultra Family

Widely Tunable, Hands-Free, Modelocked Ti:Sapphire Lasers

System Specifications

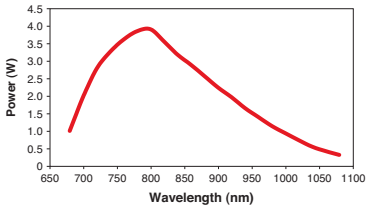
	Chameleon Ultra	Chameleon Ultra I	Chameleon Ultra II
Average Power[1] (W)	>2.5	>2.9	>3.5
Tuning Range (nm)	690 to 1020	690 to 1040	680 to 1080
Peak Power[1] (kW)	>200	>250	>300
Power Specifications[1]	>500 mW at 690 nm >1.4W at 710 nm >2.5W at 800 nm >1.4W at 920 nm >450 mW at 1020 nm	>600 mW at 690 nm >1.5W at 710 nm >2.9W at 800 nm >1.45W at 920 nm >450 mW at 1020 nm >300 mW at 1040 nm	>650 mW at 680 nm >1.6W at 700 nm >3.5W at 800 nm >1.6W at 920 nm >550 mW at 1020 nm >200 mW at 1080 nm
Tuning Speed[2] (nm/s)	>35	>40	>40
Pulse Width[1,3] (fs)	140		
Noise[4] (%)	<0.15		
Output Power Stability[5] (%)	<±0.5		
Spatial Mode	TEM_{00} (M^2 <1.1)		
Beam Diameter[1,6] (mm)	1.2 ±0.2		
Beam Ellipticity[1,7]	0.9 to 1.1		
Astigmatism	<10%		
Repetition Rate (MHz)	80		
Polarization	Horizontal >500:1		
Pointing (µrad/nm)	<0.5		

Utility and Environmental Requirements

Operating Voltage	90 to 250 VAC (auto ranging)
Maximum Operating Current	<15A at 90 VAC (power supply) <7A at 90 VAC (chiller) <2A at 90 VAC (MRU X1)
System Power Consumption	2300W max., 1300W typical
Line Frequency	47 to 63 Hz
Operating Temperature Range	15 to 35°C (59 to 95°F)
Weight of Laser Head	42 kg (93 lbs.)
Weight of Power Supply	41 kg (90 lbs.)
Umbilical Length	4 m (13 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 sech² 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 Ultra II Typical Tuning Curve



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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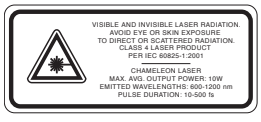

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Printed in the U.S.A. MC-xxx-10-0M0510

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