

# Chameleon MPX

## Multiphoton Microscopy Wavelength Extension

Chameleon MPX extends the wavelength range of Chameleon Vision and Ultra Ti:Sapphire lasers, and is specifically designed and optimized for non-linear imaging techniques.

Employing the latest generation fan-poled OPO technology, the fully automated Chameleon MPX delivers high peak power to the sample plane with short pulses and dispersion compensation optimized for typical commercial microscope systems.

Featuring a wide pump tuning range, the Chameleon MPX offers independently tunable dual beam excitation of popular fluorescent probes (e.g. eGFP, mCherry), enabling powerful and truly flexible multimodal imaging.



### FEATURES & BENEFITS

- Fully automated for hands-free operation
- Performance optimized for non-linear imaging applications
- 130 fs short pulses for high peak power
- Dispersion compensated output to optimize pulse width at the sample
- Gap-free tuning from 680 nm to 1340 nm with Chameleon pump laser
- Independent wavelength tuning of pump laser and OPO for simultaneous 2-color excitation
- Synchronized output pulse trains for CARS/SRS and wavelength mixing

### APPLICATIONS

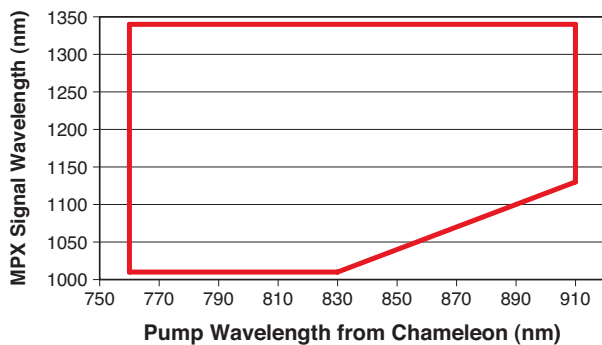
- Multiphoton Excitation Microscopy
- Second Harmonic Generation Imaging
- Third Harmonic Generation Imaging
- CARS/SRS Microscopy
- Ultrafast Spectroscopy
- Non-linear Optics

SYSTEM SPECIFICATIONS	Pumped by Chameleon Ultra II	Pumped by Chameleon Vision II
Tuning Range <sup>1</sup> (nm)	1010 to 1340	1010 to 1340
Pump Wavelength Range (nm)	760 to 910	760 to 910
Output Power <sup>2</sup> (mW) (signal)	>750	>700 <sup>3</sup>
Pump Output Power Available <sup>4</sup> (%) when pumping OPO in bypass mode		~15 95
Pulse Width <sup>5</sup> (fs) (typical)		130
Output GDD Precompensation <sup>6</sup> (fs <sup>2</sup> )		-6000
M <sup>2</sup> (typical)		<1.1
Beam Diameter (mm)		2
Beam Divergence (mrad) (typical)		0.7
Polarization		Horizontal
Repetition Rate (MHz)		80 (locked to pump laser)
Dimensions (L x W x H)		520 x 369 x 158 mm (20.5 x 14.5 x 6.2 in.)

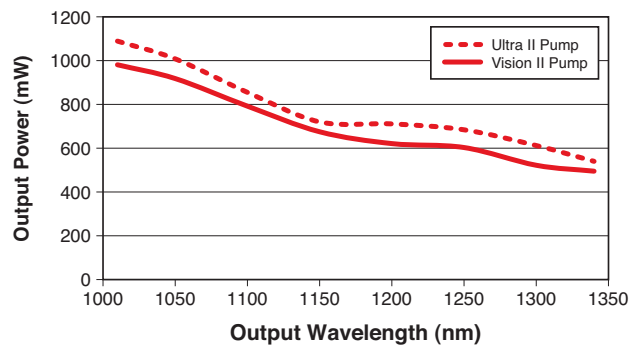
1 Tuning range depends on Pump Wavelength.  
 2 At maximum of pump and OPO signal tuning curve.  
 3 Vision Dispersion settings optimized.  
 4 Typical. Please refer to Chameleon datasheet for respective power specifications.  
 5 Typical value at sample plane after microscope dispersion.  
 6 Typical value at 1100 nm.

TYPICAL PERFORMANCE DATA

Chameleon MPX  
Dual Tuning Range



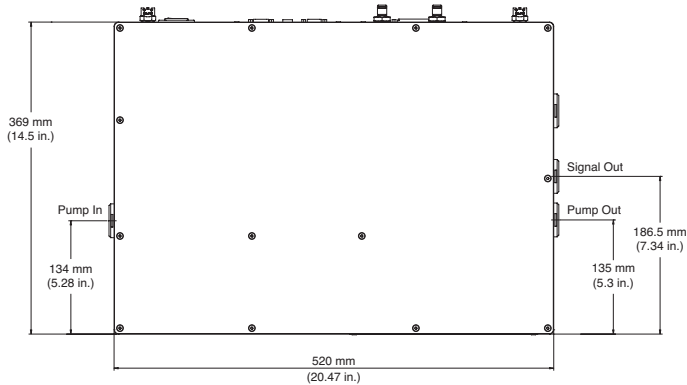
Chameleon MPX  
Typical Output Power



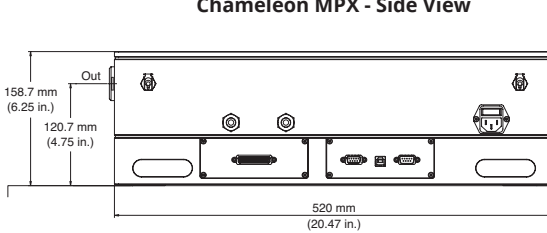
## MECHANICAL SPECIFICATIONS

### Chameleon MPX

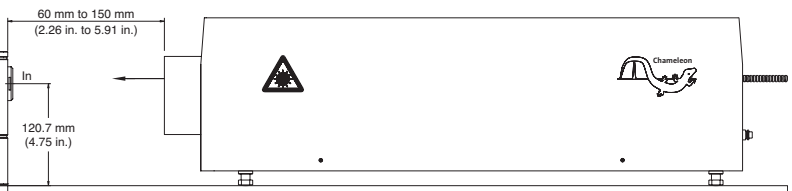
Chameleon MPX - Top View



Chameleon MPX - Side View



Chameleon - Side View



Chameleon and Chameleon MPX Table Layout



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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](http://www.coherent.com) or contact your local Sales or Service Representative. MC-021-14-0M1118Rev.A Copyright ©2018 Coherent, Inc.

