

# Chameleon VUE Harmonics

## Visible and Ultraviolet Extension for Chameleon Ti:Sapphire Lasers

Chameleon VUE is a series of Harmonics Generation options for generating visible and deep UV wavelengths in an automated hands-free package.

VUE SHG is a second harmonic generation system, which can cover 340 nm to 540 nm.

VUE THG is a third harmonic generation system, spanning 227 nm to 540 nm.

VUE modules can communicate with the Chameleon laser to automatically optimize crystal phase matching as the wavelength of the pump laser varies.

The modular instrument design focuses on user-friendliness and compactness, with software-controlled wavelength tuning available. Great care has been applied to the optimization of the nonlinear conversion processes within the modules. As a result high conversion efficiencies can now be achieved at all input power levels with minimum pulse broadening. The system is also designed to optimize beam pointing stability and the beam intensity profile.

Chameleon VUE is ideal for spectroscopic applications such as transient absorption spectroscopy and time-resolved imaging techniques such as FRET and FLIM.

#### **FEATURES**

- Widely-tunable ultrafast visible and UV
- · Automated phase matching
- High conversion efficiencies
- Excellent beam quality
- Robust and compact design
- Motorized actuators with software control
- Compatible with all 80 MHz Chameleon Ti:Sapphire laser models
- User GUI
- Extended wavelengths ranges (FHG) available on request

#### **APPLICATIONS**

- Ultrafast Spectroscopy
- · Transient Absorption Spectroscopy.
- · Non-linear Optics
- Fluorescence Lifetime Imaging





SPECIFICATIONS	Chameleon VUE SHG	Chameleon VUE THG
Chameleon Ultra II Pump		
Tuning Range (nm)	340 to 540	227 to 540 <sup>1</sup>
Conversion Efficiency <sup>2</sup> (%)	>40	>10
Chameleon Vision II Pump		
Tuning Range (nm)	340 to 540	227 to 540 <sup>1</sup>
Conversion Efficiency <sup>2</sup> (%)	>40	>10
Chameleon Vision S Pump		
Tuning Range (nm)	345 to 520	230 to 345 <sup>1</sup>
Conversion Efficiency <sup>2</sup> (%)	>30	>8
MECHANICAL PARAMETERS		
Dimensions (L x W x H)	385 x 286 x 207 mm (15.2 x 11.3 x 8.1 in.)	

VUE THG also includes SHG stage for access to SHG wavelengths, typical efficiency 20% at peak.

Power (mW)

#### TYPICAL PERFORMANCE DATA

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Wavelength (nm)

**VUE SHG Typical Tuning Curve** 

(Ultra II Pump)

#### **VUE THG Typical Tuning Curve** (Ultra II Pump) Power (mW) SHG THG Wavelength (nm)

### COHERENT.

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<sup>&</sup>lt;sup>2</sup> At peak of tuning range.