

# Femtosecond and Picosecond Harmonic Generation Unit

Automated Frequency Doubler for Ti:Sapphire Lasers

## ORIA™ BLUE



### KEY FEATURES —

- Highest conversion efficiency.
- Broad wavelength coverage with a single set of optics.
- Excellent beam quality.
- Simultaneous IR and UV outputs.
- Compatible with standard femtosecond and picosecond Ti:Sapphire oscillators.

### APPLICATIONS —

- Nonlinear Spectroscopy.
- Quantum Optics.
- Biophotonics.
- Biochemistry.

## TUNE YOUR WAVELENGTH

Broadly Tunable Laser Systems for Science & Technology

## Description

The Oria™ Blue offers an innovative, easy-to-use and reliable doubling unit that efficiently converts the near-IR emission of mode-locked ultrafast Ti:Sapphire lasers (typically 680–1100 nm) into the near-UV and visible spectrum (340–550 nm).

Based on novel nonlinear optical technology, the Oria™ Blue doubler provides exceptional beam quality, combined with high conversion efficiency and reduced pulse broadening.

The Oria™ Blue is available in both manual and automated hands-free versions and is compatible with standard femtosecond and picosecond MHz repetition rate Ti:Sapphire oscillators. Installation is straightforward and alignment-free.

This compact unit provides an excellent tool for a wide range of applications requiring femtosecond and picosecond light pulses at MHz repetition rates.

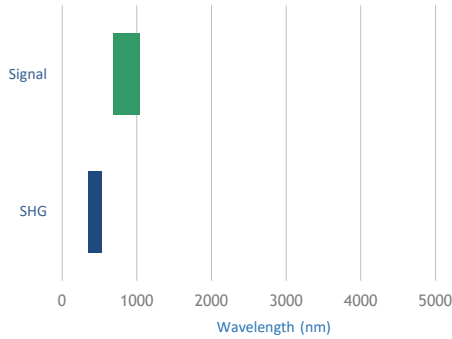
## Specifications<sup>(1)</sup>

Output Characteristics	Pumped with Ti:Sapphire oscillator, 2.8 W at 820 nm, 80 MHz, 90 fs (690 - 1040 nm)	Pumped with Ti:Sapphire oscillator, 3.3 W at 820 nm, 80 MHz, 140 fs (680 - 1080 nm)
Tuning Range	345 - 520 nm	340 - 550 nm
Average Power	> 1.2 W at 410 nm	> 1.2 W at 410 nm
Pulse Width	< 150 fs at 860 nm	< 180 fs at 860 nm
Spatial Mode	TEM <sub>00</sub>	TEM <sub>00</sub>
Repetition Rate	80 MHz	80 MHz
Operation	Manual and fully automated versions	Manual and fully automated versions
Size (W x L x H)	200 x 364 x 155 mm (7.9 x 14.3 x 6.1 inch)	200 x 364 x 155 mm (7.9 x 14.3 x 6.1 inch)

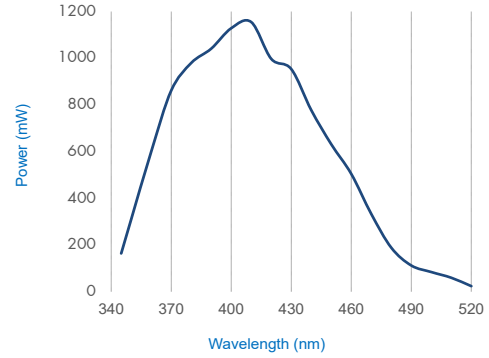
Notes: (1) Specifications are subject to change without notice.

## Oria™ VIS Wavelength Coverage

### Output Ports

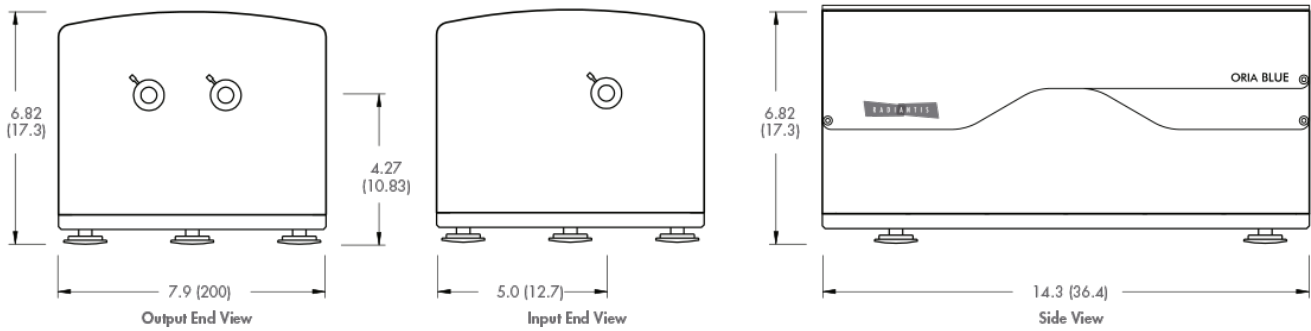


## Typical SHG Tuning Curve



Oria™ Blue generates two synchronised beams that simultaneously provide the converted output in the near-UV and visible spectrum (340-550 nm) and the unconverted fundamental in the IR spectrum (680-1100 nm). The full spectrum is covered by a single set of optics for maximum flexibility.

## Dimensions



Notes: Dimensions in cm