

Femtosecond and Picosecond Harmonic Generation

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.

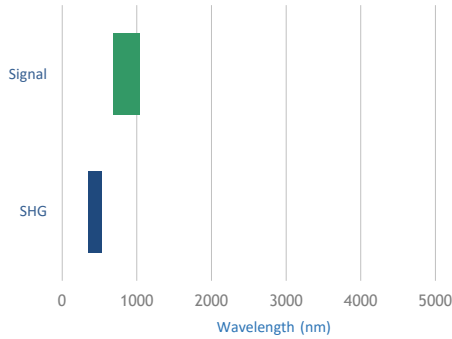
Specifications⁽¹⁾

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 ₀₀	TEM ₀₀
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)

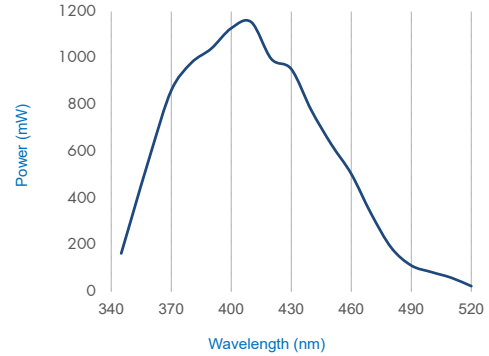
Notes: (1) Specifications are subject to change without notice.

Oria VIS Wavelength Coverage

Output Ports

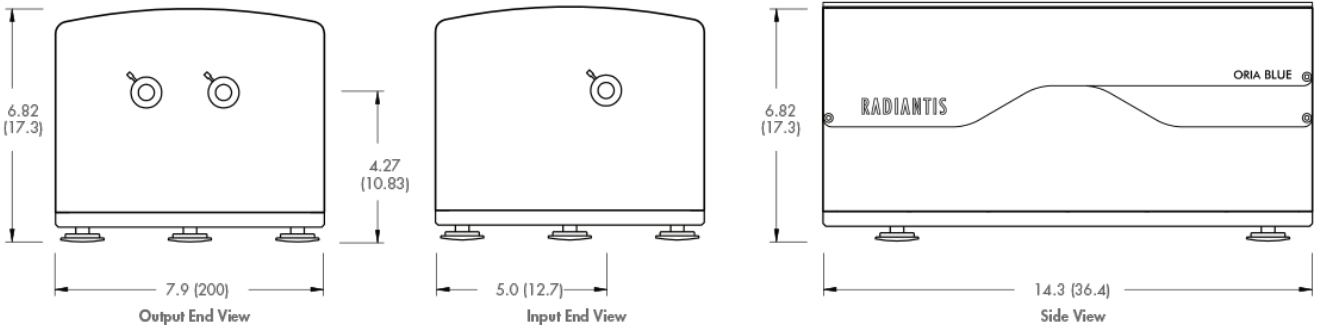


Typical SHG Tuning Curve



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