

Oria Blue

Femtosecond & Picosecond Second Harmonic Generation

The **ORIA BLUE** is a compact frequency-conversion module designed to extend ultrafast Ti:Sapphire laser sources into the visible and near-UV spectral regions. Utilizing advanced nonlinear optical technology, it delivers high conversion efficiency, excellent beam quality, and reliable long-term operation while preserving the ultrafast pulse characteristics of the driving laser. Available in both manual and automated configurations, the ORIA BLUE offers straightforward integration and alignment-free operation, providing a versatile solution for spectroscopy, microscopy, photochemistry, and other applications requiring tunable ultrafast visible and UV light.

APPLICATIONS

- Ultrafast spectroscopy
- Nonlinear microscopy
- Time-resolved and pump-probe spectroscopy
- Raman microscopy
- Plasmonics

Available models

- **Oria Blue Auto:** Fully automated tuning with full-range SHG and IR outputs.
- **Oria Blue Manual:** Manual tuning with full-range SHG and IR outputs.



KEY FEATURES

- Exceptionally high conversion efficiency (>45%)
- Femtosecond and picosecond operation
- Broad wavelength coverage from 680 – 1040 nm with a single set of optics
- Excellent beam quality
- Simultaneous IR (depleted pump) and UV/Vis (SHG) outputs
- Automated hands-free and manual models
- Compatible with standard femtosecond and picosecond Ti:Sapphire oscillators

Typical performance specifications^(1,2)

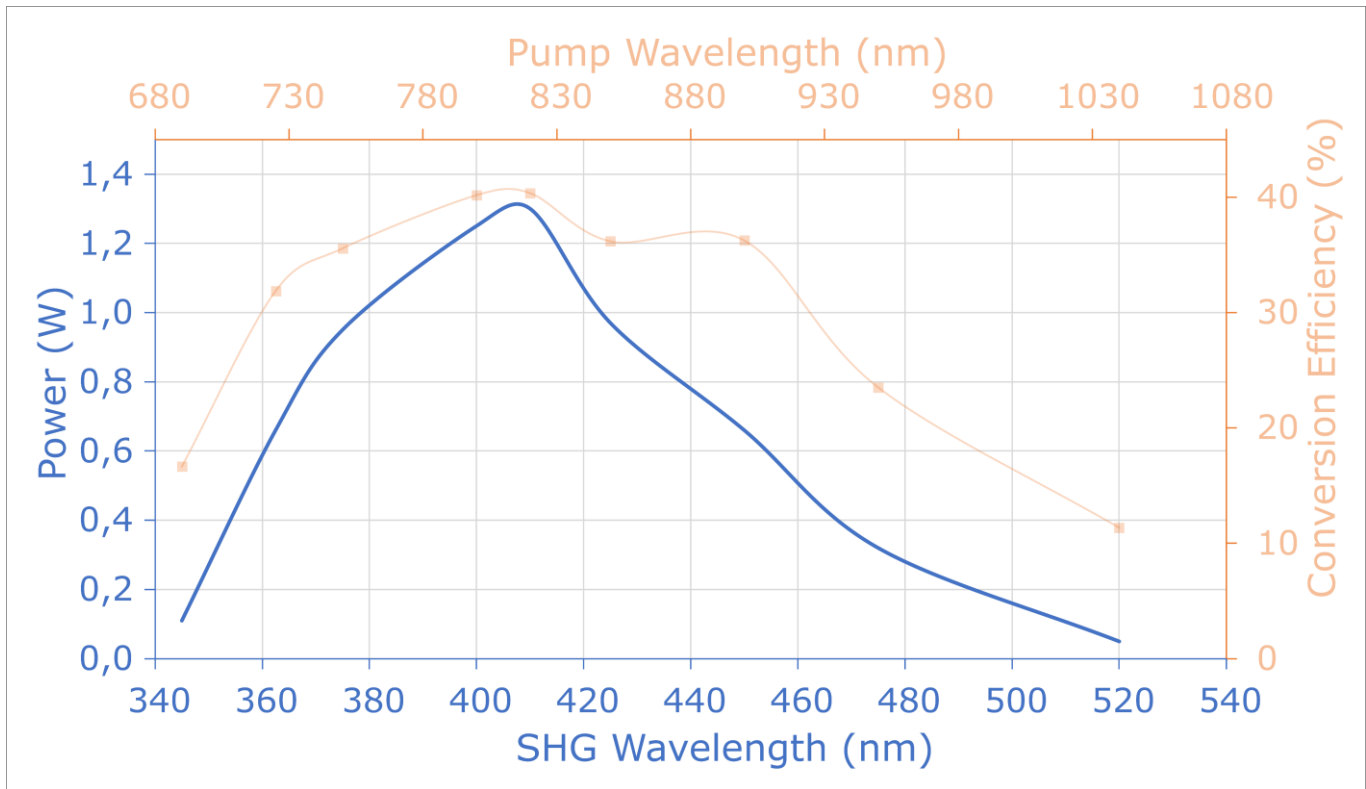
Specification	Oria Blue
	SHG
Wavelength range	345 – 520 nm
Output power	>1.2 W @410 nm
Pulse width (FWHM)	<150 fs at 430 nm
Power stability (RMS)	<1% @410 nm
Beam diameter ⁽³⁾	1 mm @410 nm
Polarization	Vertical
Spatial mode	TEM ₀₀
Repetition rate	80 MHz
Optical outputs	Free-space
Size	200 x 364 x 155 mm (7.9 x 14.3 x 6.1 inch)

- 1) Specifications obtained when pumped by Mai Tai® HP Ti:sapphire oscillators, 2.8W at 820 nm, 90 fs, 80 MHz, 690-1040 nm. Output characteristics with alternative pump lasers may change.
- 2) Specifications are subject to change without notice
- 3) Measured at 3 cm from output port.

Environmental specifications

Specification	Titan CW OPO
Power supply	±15 V/5 V
Communication interface	USB/Serial
Environmental conditions of use	Lab environment, dust-free air conditions, pollution degree 2
Operation humidity	20 - 80% non-condensing for temperatures up to 25°C
Operation temperature	18 - 26°C

Typical performance data



Typical tuning curve of Oria Blue and conversion efficiency

Dimensions

