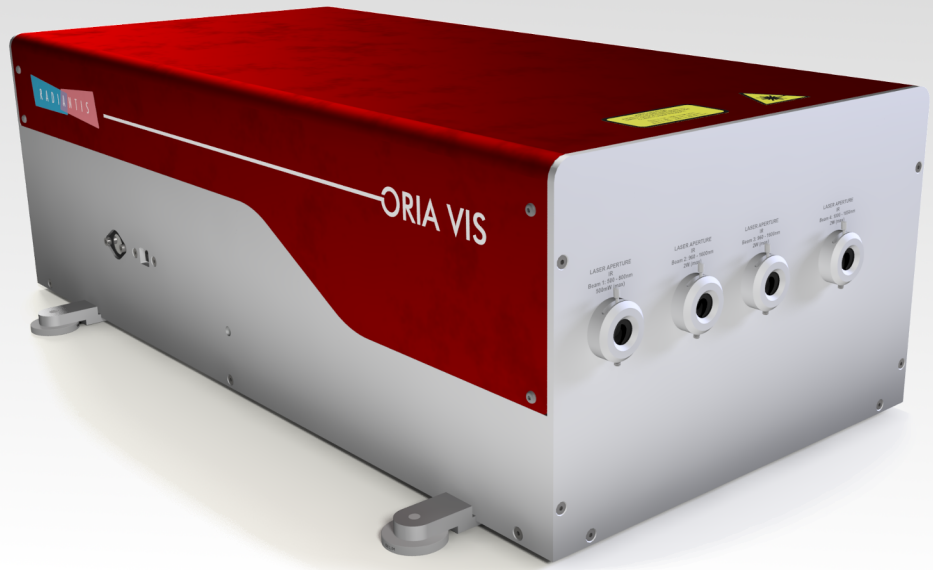
NEW PRODUCT

ORIA VIS

Fully-Automated Visible Wavelength Extension for Femtosecond IR OPOs



Key Features

- Tunable across 495 - 775 nm when pumped across 990 - 1550 nm. Without any change of optics.
- Highest power with >400 mWatts at the peak of the tuning range.
- Four outputs are available: 1) 990 - 1550nm at full power, 2) 495 - 775 nm, 3) 1680 - 4000 nm, 4) 990 - 1550 nm undepleted.
- Excellent beam pointing stability with TEM_{00} spatial quality.
- Hands-free operation with a dedicated control software. Control drivers available.

Applications

- Time-resolved spectroscopy
- Single-molecule spectroscopy
- Pump-probe experiments
- CARS and Raman microscopy
- Nanophotonics
- Micromachining
- Quantum optics

Broad tuning in the visible spectrum is now possible with the Oria VIS, a wavelength extension to most commercial femtosecond IR OPOs. This sophisticated second harmonic generation (SHG) module, converts the IR spectrum of a femtosecond IR OPO (990 - 1550 nm) into the visible range (495 - 775 nm) in a simple fashion.

The Oria VIS features the highest conversion efficiency in its class, providing more than 40% conversion efficiency and 400 mW at the peak of the tuning range. As a result, output powers of more than 400 mW can be achieved when pumped by 1 Watt femtosecond pulses in the IR. High peak-to-peak power stability and excellent beam pointing across the complete spectral range make the Oria VIS a convenient tool for a range of scientific applications, including time-resolved spectroscopy and quantum optics.

The Oria VIS includes four output ports which deliver 1) the OPO signal (990 - 1550 nm), 2) the SHG of the OPO signal (495 - 775 nm), 3) the OPO idler (1680 - 4000 nm) and 4) the depleted OPO signal (990 - 1550 nm). It incorporates a pump bypass which enables the selection of 100% of the OPO signal and idler (with no SHG of the signal) or 100% of the SHG of the signal (simultaneously with the undepleted OPO signal and 100% of the idler).

Designed for pick-and-place installation, it ensures virtually maintenance-free operation and highest usability since it does not require manual alignment, being exclusively controlled by a PC. Control drivers are also available.

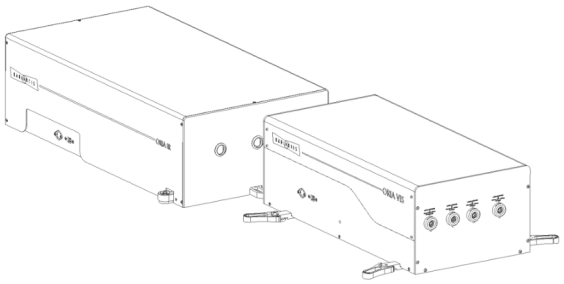
Specifications[1]

Output Characteristics	Oria VIS
Tuning range	495 - 775 nm
Output power[2]	> 400 mW
Pulse width[3]	< 180 fs
Beam diameter at 525 nm	2.5 mm
Beam divergence	< 1 mrad
Beam displacement with wavelength	< 2.5 µm
Spatial mode	TEM_{00}
Polarization	Vertical
Repetition rate	80 MHz
Size (W x L x H)	568.0 x 366.5 x 189.2 mm (22.4 x 14.4 x 7.5 inch)

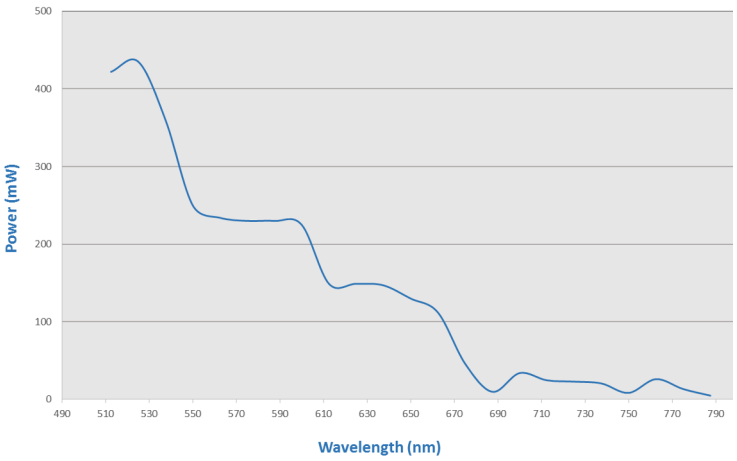
Notes

[1] Specifications are subject to change without notice
[2] At the peak of the tuning range, when pumped by Oria IR OPO
[3] When pumped with Oria IR OPO

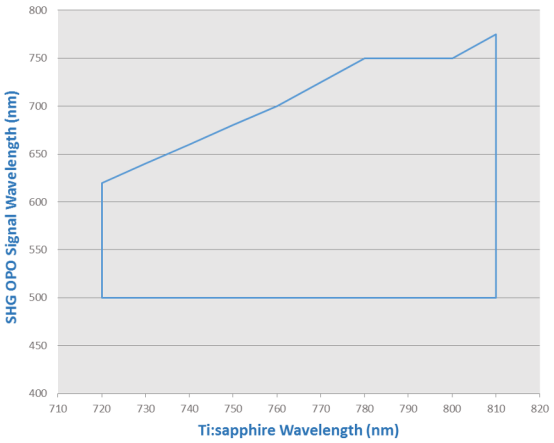
ORIA IR and ORIA VIS



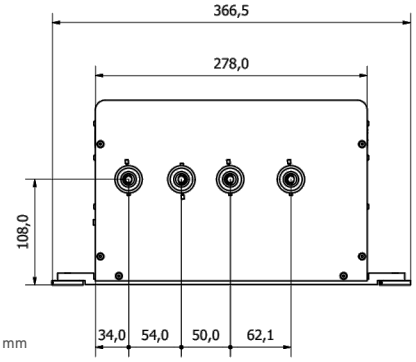
ORIA VIS Typical Tuning Curve

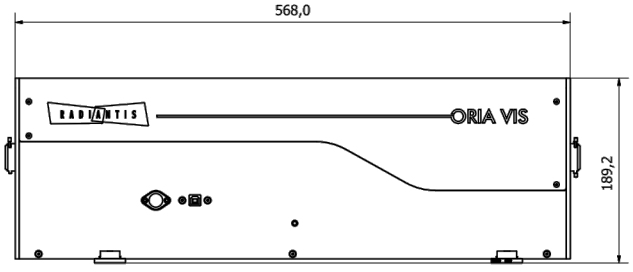


ORIA VIS Diamond Chart



ORIA VIS Dimensions





Dimensions in mm

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