

# Zenith™

Broadly Tunable Picosecond OPO-Based Laser System



## Key Features

- Tuning across 1400 – 2000 nm and 2200 – 4200 nm
- The highest output power with >4 W at the peak of the 1400 - 2000 nm and >2 W at the peak of the 2200 - 4200 nm ranges
- 3 outputs available: 1) signal, 2) idler and 3) pump bypass. Signal and idler are delivered simultaneously
- Picosecond pulse duration across the range
- Hands-free operation with dedicated control software. Control drivers available
- Sealed, compact, and virtually maintenance-free
- Integrated spectrometer
- Fully-integrated OPO-based laser system with wide

## Applications

- Time-resolved spectroscopy in the mid-IR
- Single and dual-comb spectroscopy
- Vibrational overtone spectroscopy
- Semiconductor research and spectroscopy
- Multiple wavelength pump-probe experiments

Radiantis introduces the Zenith™, a picosecond OPO-based laser system broadly tunable in the 1400 – 4200 nm range. Featuring the highest power levels in the market (>4 W across 1420 and 2000 nm and >2 W across 2200 and 4200 nm), Zenith™ delivers a powerful and convenient source for ultrafast spectroscopy and pump-probe experimental sciences.

Zenith™ has been especially designed for fully-automated tuning to enhance usability and practicality in applications. A simple and reliable control software renders it an extremely convenient hands-free system which enables the researcher to effectively focus on advancing their research with minimum time investment in laser maintenance. Control drivers are available.

Three output ports deliver: 1) the signal, 2) the idler and 3) the pump bypass. Excellent beam pointing stability with time and wavelength is provided.

Zenith™ is a sealed fully-integrated laser system, incorporating the pump laser and OPO, which ensures maximum compactness and stability.

## Specifications<sup>1</sup>

Output Characteristics	Zenith	Zenith XT
Output 1: Signal tuning range	1400 – 2000 nm	1400 – 2000 nm
Output 2: Idler tuning range		2200 – 4200 nm
Output 3: Pump wavelength	1064 nm	1064 nm
Pump output power	>10 W	>10 W
Signal output power <sup>(2)</sup>	>4 W	>4 W
Idler output power <sup>(2)</sup>		>2 W
Signal pulse width	<15 ps	
Idler pulse width	<15 ps	
Pump pulse width	<20 ps	
Beam diameter	3 mm +/- 10%	
Spatial mode	TEM <sub>00</sub>	
Signal noise	<1% rms	
Output ports	1) Signal 2) Idler 3) Pump bypass	
Power stability	5%	
Polarization	Linear	
Repetition rate	80 MHz	
Size (W x L x H)	625 x 330 x 163 mm ( 24.6 x 13 x 6.4 inch)	

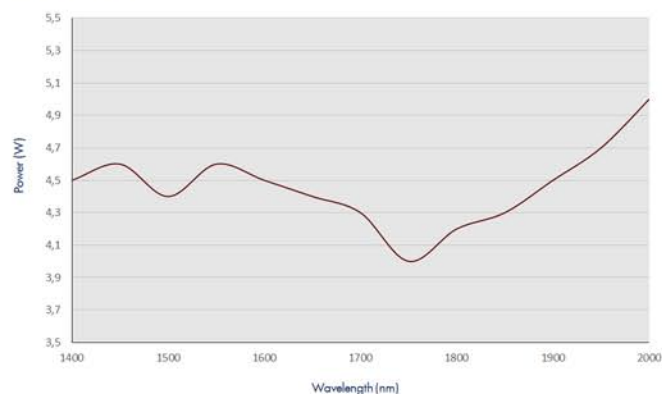
### Notes

<sup>(1)</sup> Specifications are subject to change without notice

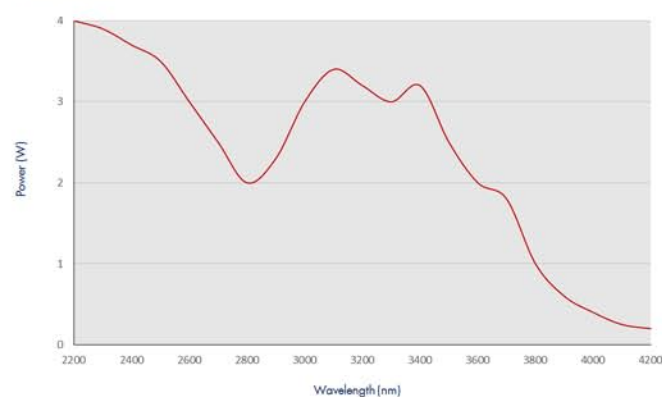
<sup>(2)</sup> At peak of pump and OPO signal/idler tuning range

## Zenith™ Typical Tuning Curves

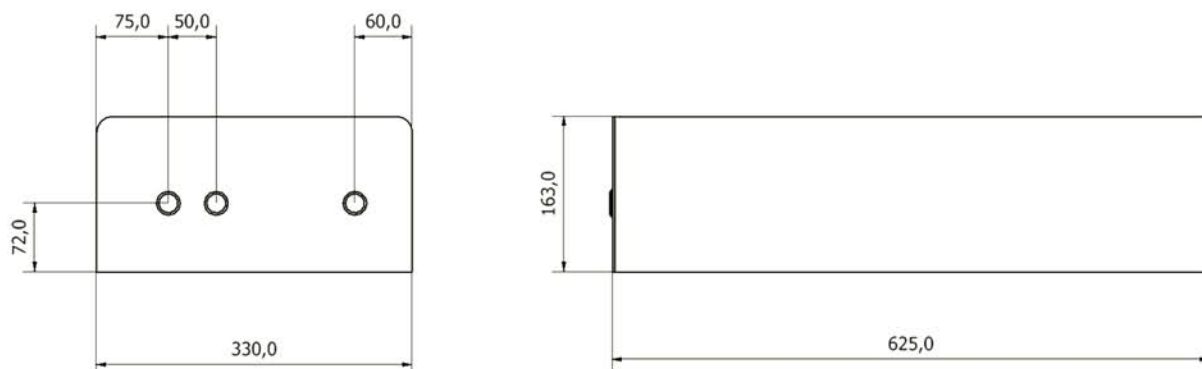
Zenith™ Signal



Zenith™ Idler



## Zenith™ Dimensions



Dimensions in mm

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Address: Carrer Copèrnic, 2-4, Polígono Industrial Camí Ral, 08850 Gavà, Barcelona (Spain)

Phone: +34 936 389 763 | E-mail: info@radiantis.com | Web: www.radiantis.com

