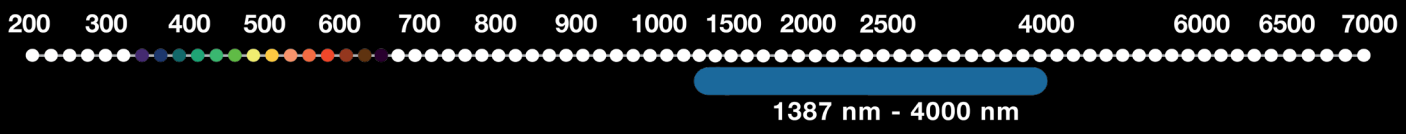
RADIANTIS
www.radiantis.com

Broadly Tunable Picosecond OPO Laser

Tuning across 1387 - 2020 nm (4950 - 7209 cm^{-1}) and 2100 - 4000 nm (2500 -4761 cm^{-1})



ZENITH

KEY FEATURES

- Output Ports:
  1) Signal: 1387 - 2020 nm (4950 - 7209 cm-1)
  2) Idler: 2100 - 4000 nm (2500 -4761 cm-1)
  3) Pump Bypass: 1030 nm (9708 cm-1)
- Simultaneous Outputs: All
- Average Power: >4 W
- Pulse Duration: <7 ps (2 ps available on-demand)
- Repetition Rate: 80 MHz
- Built-in pump

APPLICATIONS

- Linear & Non-Linear Spectroscopy & Microscopy.
  (SHG, THG, Two-Photon, Multiphoton)
- Plasmonics.
- Pump-Probe Spectroscopy.
- Raman Spectroscopy & Microscopy.
  (CARS, SRS)
- Time-Resolved Spectroscopy & Microscopy.
  (FLIM, TR-FRET, TCSPC)

Description

Radiantis introduces ZENITH, a Picosecond OPO Laser broadly tunable across the 1387 – 4000 nm range. Featuring the highest power levels in the market [a >4 W across 1387 - 2020 nm (4950 - 7209 cm-1), >2 W across 2100 - 4000 nm (2500 -4761 cm-1)], ZENITH delivers a powerful and convenient source for ultrafast spectroscopy and pump-probe experimental sciences.

The picosecond OPO 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.

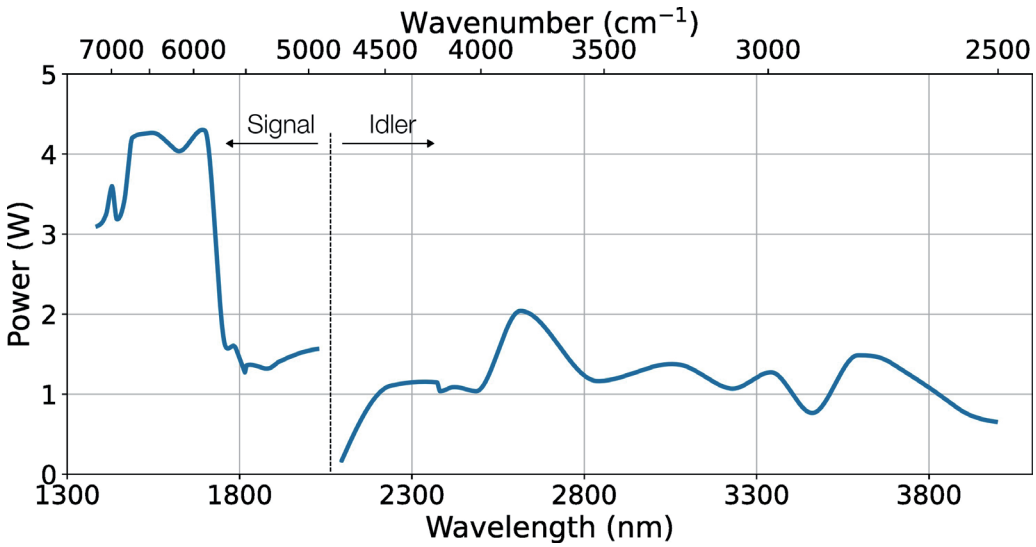
Specifications(1)

Output Characteristics	ZENITH LP	ZENITH HP
Signal Tuning Range(2)	1387 - 2020 nm (4950 - 7209 cm^{-1})	1387 - 2020 nm (4950 - 7209 cm^{-1})
Idler Tuning Range(3)	2100 - 4000 nm (2500 - 4761 cm^{-1})	2100 - 4000 nm (2500 - 4761 cm^{-1})
Pump Wavelength	1030 nm (9708 cm^{-1})	1030 nm (9708 cm^{-1})
Signal Output Power(2)	> 2 W	> 4 W
Idler Output Power(2)	> 1 W	> 2 W
Signal Pulse Width	> 5 ps	> 5 ps
Idler Pulse Width	> 5 ps	> 5 ps
Pump Pulse Width	> 5 ps	> 5 ps
Beam Diameter	3 mm +/- 10%	3 mm +/- 10%
Spatial Mode	TEM_{00}	TEM_{00}
Output Ports	1) Signal 2) Idler 3) Pump	1) Signal 2) Idler 3) Pump
Power Stability(5)	< 0.5% rms	< 0.5% rms
Polarization	Linear	Linear
Repetition Rate	80 MHz	80 MHz
Size (W x L x H)	625 x 330 x 163 mm (24.6 x 12.99 x 6.4 inch)	

Notes: (1) Specifications are subject to change without notice. (2) At peak of pump and OPO signal/idler tuning range. (3) Available for XT model. (4) SHG available on request. (5) Power Stability Signal Noise at 1700 nm and Idler Noise at 2613 nm.

© Copyright Radiant Light 2025. Radiantis is a Trade Marks of Radiant Light, SL
Address: Carrer Esteve Terradas, 1, Parc Mediterrani de la Tecnologia,
08860 Castelldefels, Barcelona (Spain)

ZENITH Typical Tuning Curve

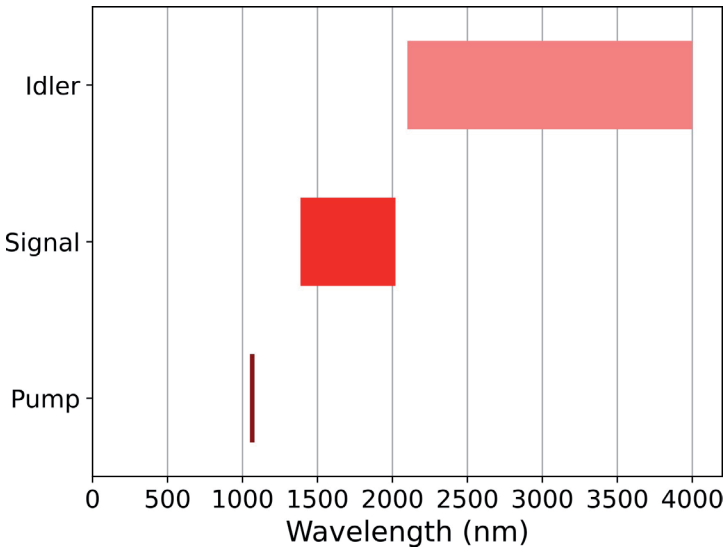


ZENITH Wavelength Coverage

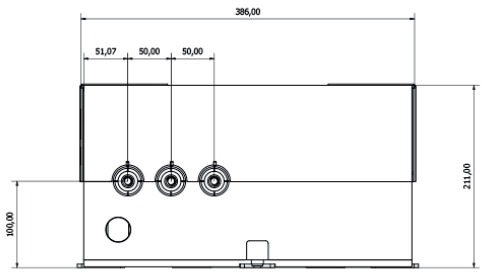
Output Ports

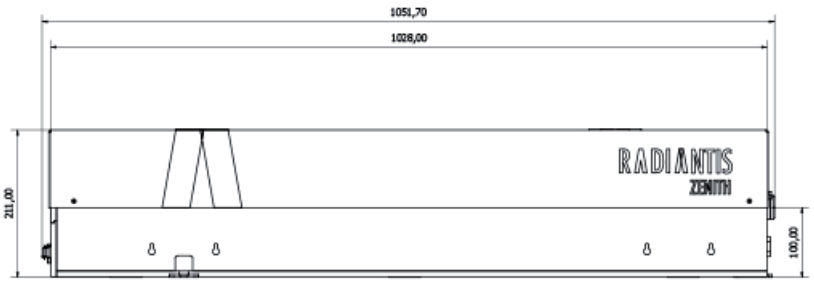
Includes three output ports which deliver:

1) The Signal 1387 - 2020 nm (4950 - 7209 cm^{-1})
2) The Idler 2100 - 4000 nm (2500 - 4761 cm^{-1})
3) The Pump 1030 nm (9708 cm^{-1})



Dimensions





Notes: Dimensions in mm

© Copyright Radiant Light 2025. Radiantis is a Trade Marks of Radiant Light, SL
Address: Carrer Esteve Terradas, 1, Parc Mediterrani de la Tecnologia,
08860 Castelldefels, Barcelona (Spain)