RADIANTIS
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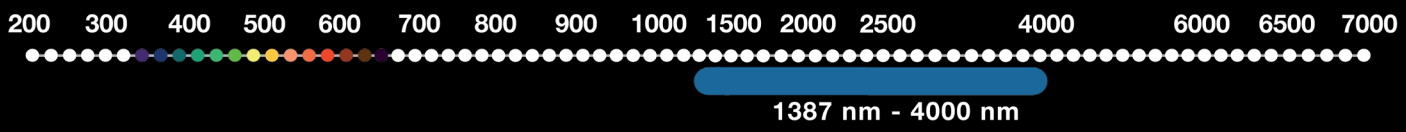
# Broadly Tunable Picosecond OPO Laser

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)

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## 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<br>2) Idler<br>3) Pump | 1) Signal<br>2) Idler<br>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.


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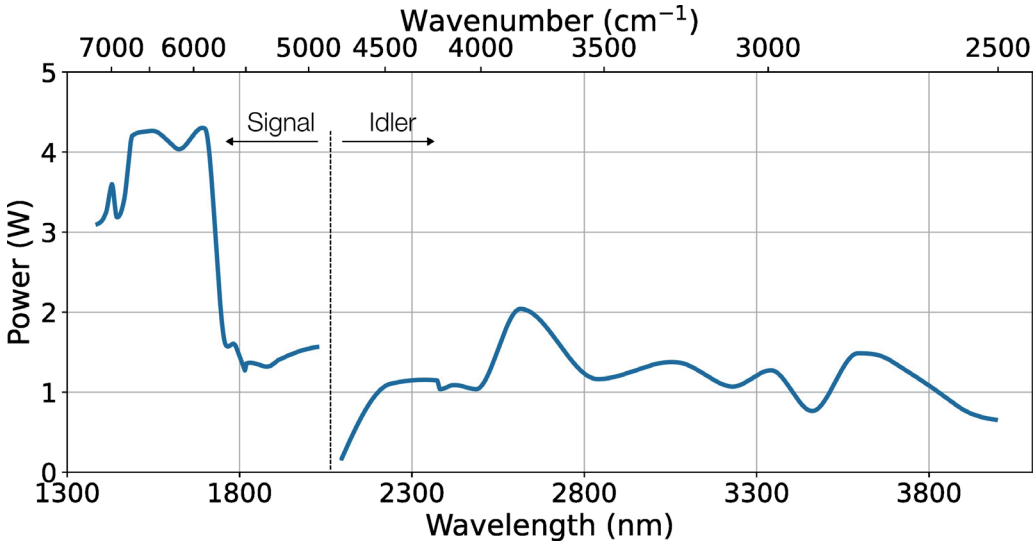
TUNE YOUR WAVELENGTH
Broadly Tunable Laser Systems for Science & Technology

## ZENITH Typical Tuning Curve

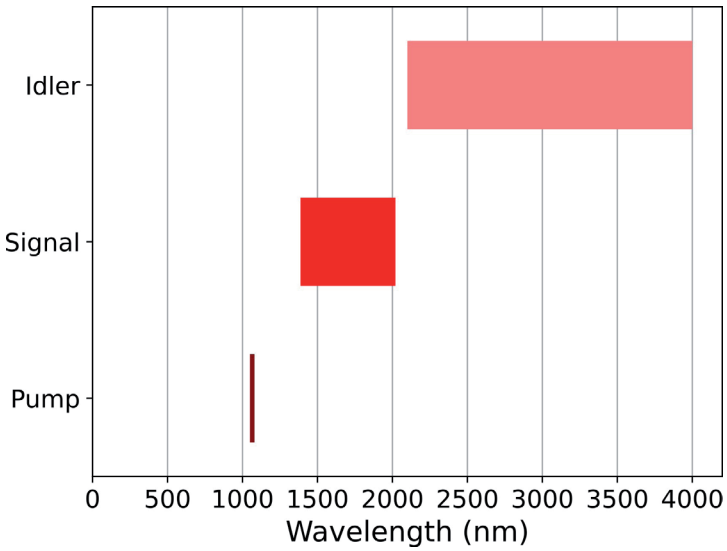



## ZENITH Wavelength Coverage

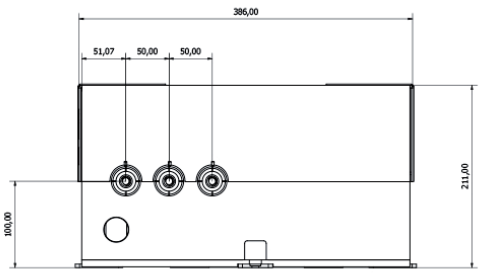
Output Ports

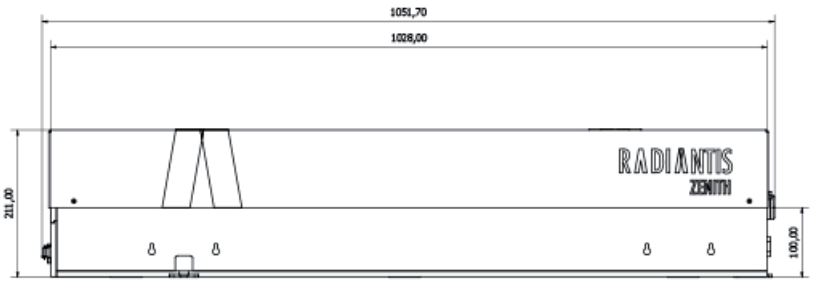
Includes three output ports which deliver:

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