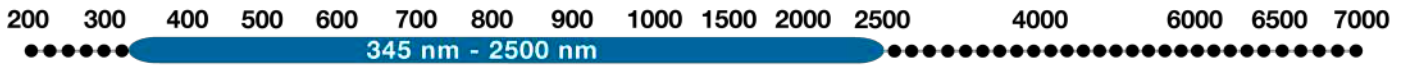
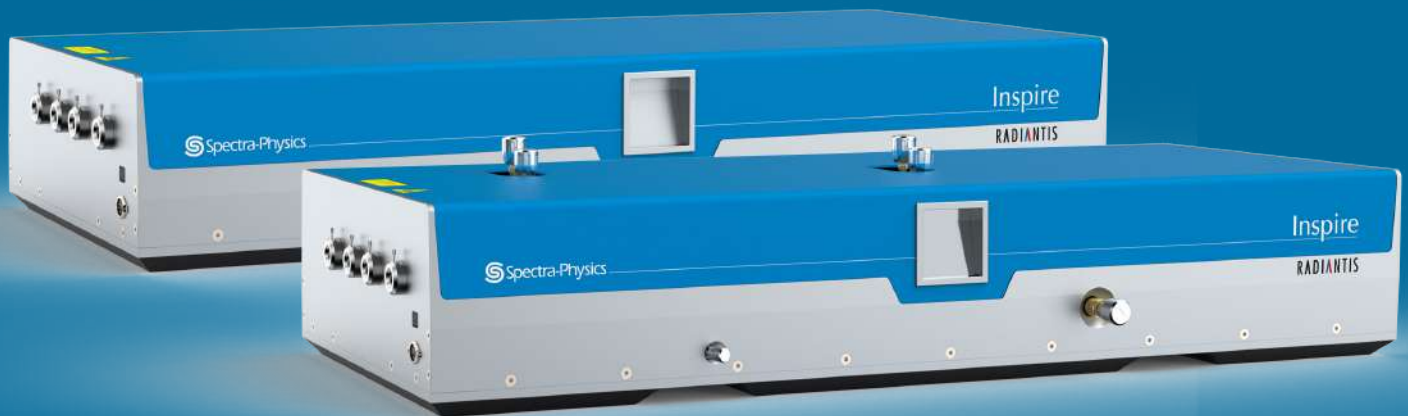


Femtosecond OPO for Ti:Sa Oscillators

Hands-Free Optical Parametric Oscillator Across 345 - 2500 nm (4000 - 28985 cm⁻¹)



Inspire



KEY FEATURES

- Gap-free tuning across the UV, Visible and IR [345-2500 nm (4000 - 28985 cm⁻¹) with a single configuration and without any change of optics.
- Fully-automated computer-controlled tuning and self-calibration.
- Simultaneous UV, Visible and IR beams available through 3 separate outputs ports.
- Integrated Second Harmonic Generation Unit for doubling the un-depleted pump.

APPLICATIONS

- CARS and Raman Microscopy.
- Plasmonics.
- Pump-Probe Experiments.
- Single-Molecule Spectroscopy.
- Time-Resolved Spectroscopy.

TUNE YOUR WAVELENGTH

Broadly Tunable Laser Systems for Science & Technology

Description

Empower your research, using the Visible, UV and IR femtosecond pulses provided by the family of synchronously-pumped Optical Parametric Oscillators (OPOs), Inspire.

Based on Radiantis patented technology, Inspire delivers near-transform-limited pulses with high average power across the spectral range of 345–2500 nm (4000 - 28985 cm⁻¹), gap-free. With a single set of optics and just one standard configuration, the unique design of the Inspire offers best-in-class access to the complete spectral range, eliminating the need of change in configuration and ensuring simultaneous access to the Visible and IR.

The Inspire is available with both hands-free technology (the Inspire HF) and, for greater flexibility, as an automatic device (the Inspire Auto). The former providing computer-controlled tuning across the full spectral range and self-calibration, and the latter allowing adjustment of the pulse duration and enhanced functionality for multiple applications.

The Inspire is also tuned at room temperature, thereby avoiding the need for ovens, water-cooling units and pipes inside the OPO cavity.

Specifications¹

| Output Characteristics ² | Inspire Auto 50 | Inspire Auto 100 | Inspire HF 50 | Inspire HF 100 |
|--|---|---|---|---|
| Average Power | | | | |
| SHG @ 400 nm (25000 cm ⁻¹) | n/a | 1100 mW | n/a | 1100 mW |
| Signal @ 550 nm (18181 cm ⁻¹) | 350 mW | 350 mW | 350 mW | 350 mW |
| Depleted Fundamental @ 800 nm | 1100 mW | 1100 mW | 1100 mW | 1100 mW |
| Idler (at peak) | 170 mW | 170 mW | 170 mW | 170 mW |
| Pulse Width | | | | |
| SHG | n/a | <140 fs | n/a | <140 fs |
| Signal | 100 - 250 fs (adjustable) | 100 - 250 fs (adjustable) | 200 fs | 200 fs |
| Depleted Fundamental | <140 fs | <140 fs | <140 fs | <140 fs |
| Idler | 80 - 250 fs (adjustable) | 80 - 250 fs (adjustable) | 200 fs | 200 fs |
| Tuning Range | | | | |
| SHG | n/a | 345 - 520 nm (19230 - 28985 cm ⁻¹) | n/a | 345 - 520 nm (19230 - 28985 cm ⁻¹) |
| Signal (Simultaneous with Idler) | 490 - 750 nm (13333 - 20408 cm ⁻¹) | 490 - 750 nm (13333 - 20408 cm ⁻¹) | 490 - 750 nm (13333 - 20408 cm ⁻¹) | 490 - 750 nm (13333 - 20408 cm ⁻¹) |
| Depleted Fundamental | 690 - 1040 nm (9615 - 14492 cm ⁻¹) | 690 - 1040 nm (9615 - 14492 cm ⁻¹) | 690 - 1040 nm (9615 - 14492 cm ⁻¹) | 690 - 1040 nm (9615 - 14492 cm ⁻¹) |
| Idler (Simultaneous with Signal) | 930–2500 nm (4000 - 10752 cm ⁻¹) | 930–2500 nm (4000 - 10752 cm ⁻¹) | 930–2500 nm (4000 - 10752 cm ⁻¹) | 930–2500 nm (4000 - 10752 cm ⁻¹) |
| Repetition Rate | 80 MHz | | | |
| Noise | <1% rms | | | |
| Wavelength Stability @ 555 nm | <0.5 nm | | | |
| Polarization | Horizontal for Signal and Idler, Vertical for SHG | | | |
| Spectrometer for UV and Visible Range ³ | 350–900 nm (integrated into optics unit) | | | |
| Size (W x L x H) ⁴ | 14.2 x 37.6 x 9.1 in (36.0 x 95.4 x 23.2 cm) | | | |

Notes:

¹ Specifications are subject to change without notice.

² Pumped by Mai Tai® HP Ti:sapphire oscillators, 2.8W, 100fs, 820nm. Output characteristics for alternative pump lasers, such as Tsunami™ are available upon request.

³ IR spectral region available upon request.

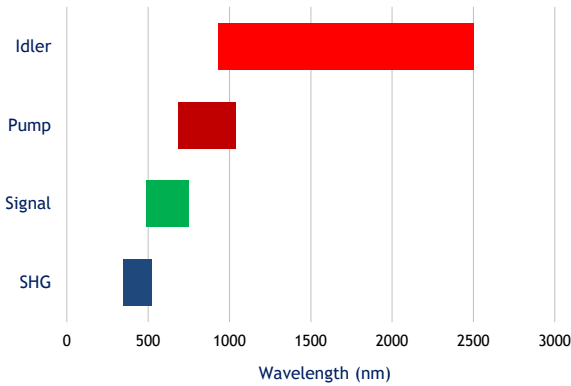
⁴ PC controllable. No control electronics unit required.



Mai Tai, Spectra-Physics, the Spectra-Physics logo and Inspire are all registered trademarks of Newport Corporation. Sold and Distributed through Newport Corporation's Spectra-Physics Brand.

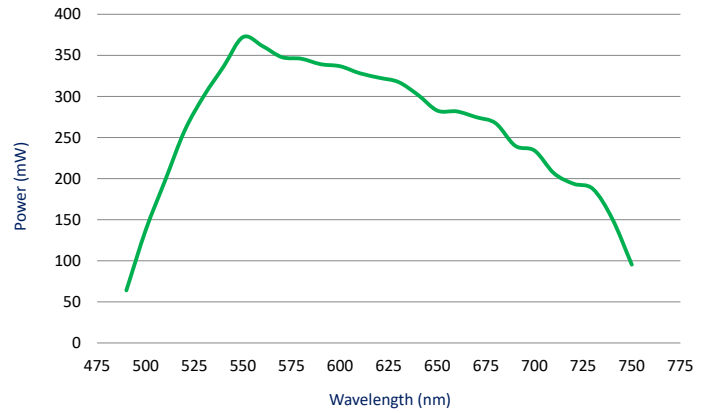
Inspire Wavelength Coverage

Outputs Ports

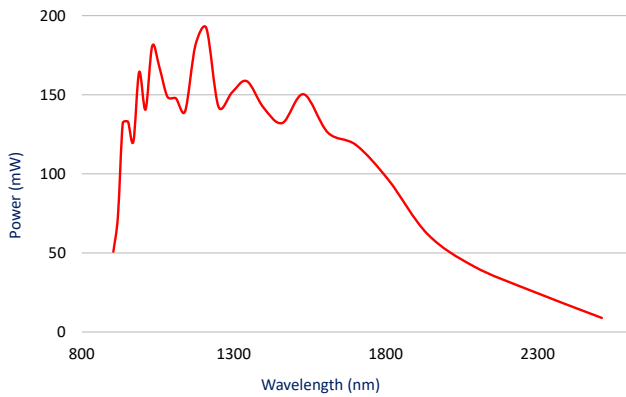


Four separate output ports provide the class-leading spectral coverage, consisting of the doubled pump [345 - 520 nm (19230 - 28985 cm⁻¹)], signal [490 - 750 nm (13333 - 20408 cm⁻¹)], idler [930 - 2500 nm (4000 - 10752 cm⁻¹)] and depleted pump [640 - 1040 nm (9615 - 14492 cm⁻¹)].

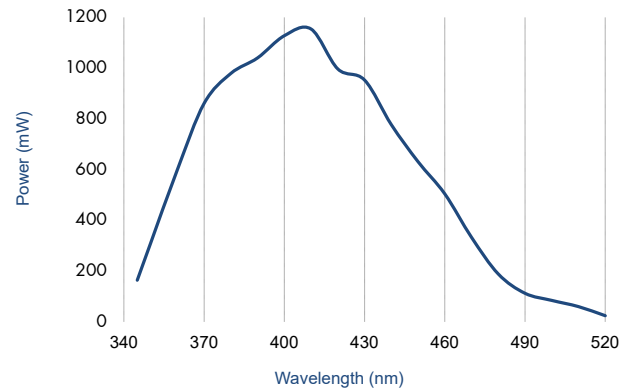
Signal Typical Tuning Curve



Idler Typical Tuning Curve



SHG Typical Tuning Curve



Dimensions

