

NEW VERSION

The Inspire™ Family

Broadly Tunable Femtosecond Optical Parametric Oscillators



Key Features

- Gap-free tuning across the UV, Visible and IR (345–2500 nm)* with a single configuration and without any change of optics
- Highest conversion efficiency with superior stability
- Excellent beam pointing stability with TEM₀₀ spatial quality
- Fully-automated computer-controlled tuning and self-calibration
- Simultaneous UV, Visible and IR beams available through 3 separate output ports
- Integrated Second Harmonic Generation Unit for doubling the un-depleted pump
- Room-temperature operation avoiding the need of water cooling

* Combined with a tunable Ti: sapphire oscillator

Applications

- Time-resolved spectroscopy
- Single-molecule spectroscopy
- Pump-probe experiments
- CARS and Raman microscopy
- Laser-induced fluorescence (LIF)
- Nanophotonics
- Micromachining

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, 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 range, eliminating the need of change in configuration and ensuring simultaneous access to the Visible and IR. Four separate output ports provide the class-leading spectral coverage, consisting of the doubled pump (345–520 nm), signal (490–750 nm), idler (930–2500 nm) and depleted pump (640–1040 nm).

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 most recent models in the Inspire™ family include upgraded and improved electronic and software systems, as part of our continued drive to simplify both their installation and their overall usability. Other refinements include faster tuning of the SHG unit and specially engineered mechanics which increase the overall stability and reliability of the system.

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

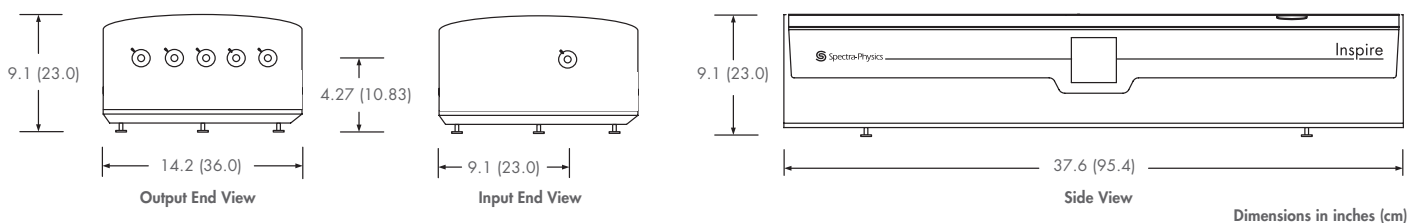
Specifications¹

Output Characteristics ²	Inspire Auto 50	Inspire Auto 100	Inspire HF 50	Inspire HF 100
Average Power				
SHG @ 400 nm	n/a	1100 mW	n/a	1100 mW
Signal @ 550 nm	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	n/a	345–520 nm
Signal (Simultaneous with Idler)	490–750 nm	490–750 nm	490–750 nm	490–750 nm
Depleted Fundamental	690–1040 nm	690–1040 nm	690–1040 nm	690–1040 nm
Idler (Simultaneous with Signal)	930–2500 nm	930–2500 nm	930–2500 nm	930–2500 nm
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)			
Dimensions (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:

- Specifications are subject to change without notice.
- Pumped by Mai Tai® HP Ti:sapphire oscillator, 2.8W, 100fs, 820nm.
- For IR spectral region, contact Spectra-Physics.
- PC controllable. No control electronics unit required.

Inspire Dimensions



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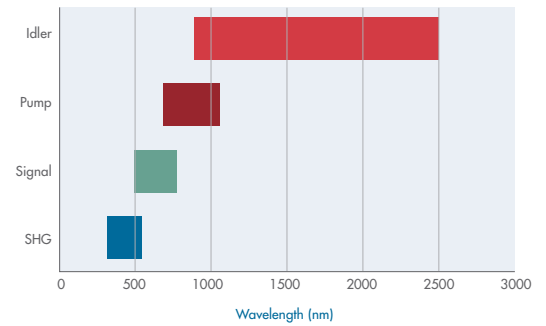
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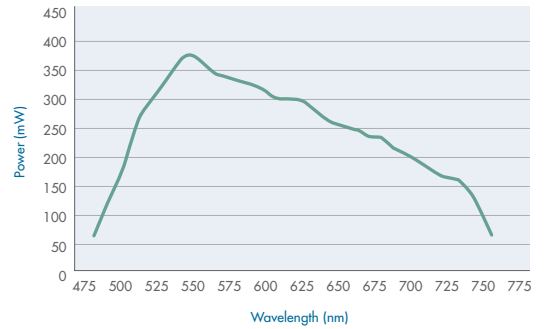


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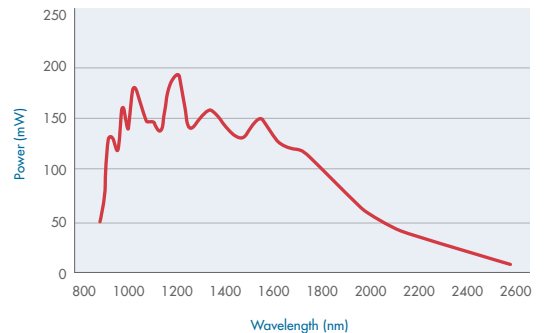
Inspire Wavelength Coverage



Signal Typical Tuning Curve



Idler Typical Tuning Curve



SHG Typical Tuning Curve

