



The Chromacity **Spark-OPO** – near to mid-infrared picosecond optical parametric oscillator



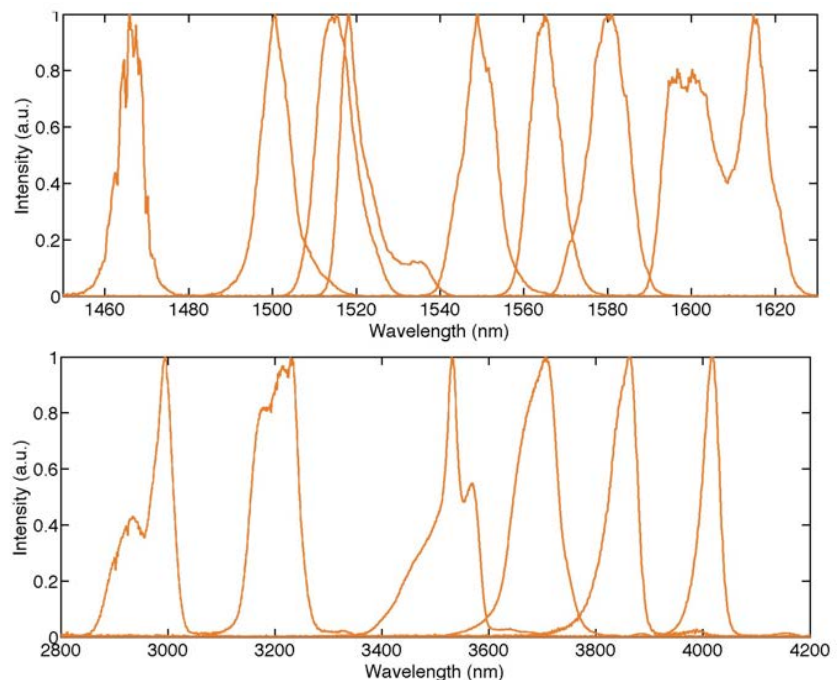
Exceptional tunability and power enabling a broad range of applications

- 1-ps pulses across 1.48 – 4.2 μm
- Up to 100 mW from signal port and 20 mW from idler port
- Optional 3rd output port delivers 500 mW at 1040 nm
- 100 MHz repetition frequency
- Linearly polarized free-space output
- Lock-to-clock option

- Time resolved spectroscopy
- FTIR micro-spectroscopy
- Gas spectroscopy
- Multi-photon microscopy
- Stand-off chemical sensing
- Material characterization and metrology
- Raman conversion
- THz generation
- Deep tissue multi-photon imaging
- Nonlinear optics
- Pump-probe experiments

Web-based laser control

- Easy to use interface
- Safety shutter and laser emission control over ethernet and wifi
- Door interlock error alerts
- Control multiple lasers
- RS232 control as standard



Representative signal (top) and idler (bottom) spectra obtained from Spark-OPO

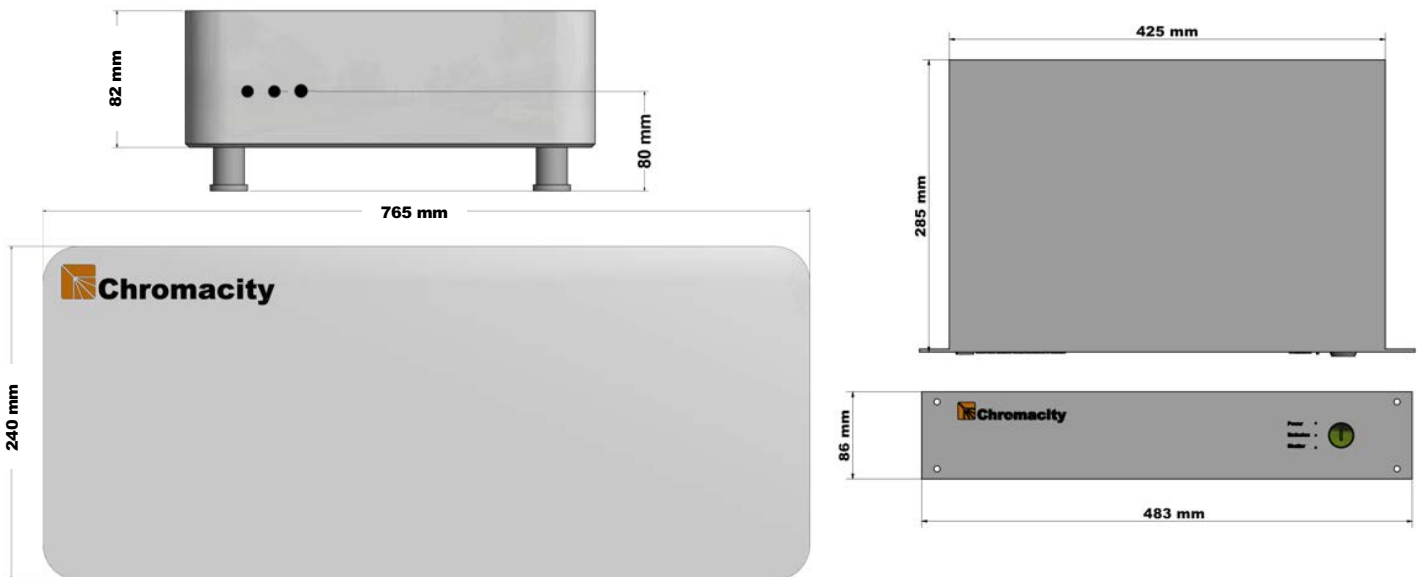
Specifications and options

Options

Signal wavelength	1.48 μm – 1.9 μm	OPO crystal can be optimized for specific wavelength ranges down to 1.35 μm
Signal power	Up to 100 mW (@ 1.5 μm)	
Idler wavelength	2.1 μm – 3.6 μm	OPO crystal can be optimized for specific wavelength ranges up to 4.2 μm
Idler power	Up to 20 mW (@ 3.3 μm)	
Pump source	Integrated Spark-HP laser oscillator	Further details of pump source on request
Pump wavelength	1040 nm	
Repetition frequency	100 MHz Monitor photodiode	Lock-to-clock option available
Beam quality	Free space (three ports), $M^2 < 1.1$ Linearly polarized Divergence < 2 mrad	
Control interface	Ethernet, and web page Serial port (for control via LabView/MatLab)	Custom interface available
Dimensions	765 x 240 x 82 mm (laser head) 483 x 285 x 86 mm (control unit)	
Weight	18 kg (laser head) 2 kg (control unit)	
Electrical	Voltage 110 – 240 V AC Frequency 50 – 60 Hz Power 80W	
Cooling	Air cooled	

Specifications subject to change

Dimensions



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