



The Chromacity **Spark-OPO HP** – near to mid-infrared quasi-CW optical parametric oscillator

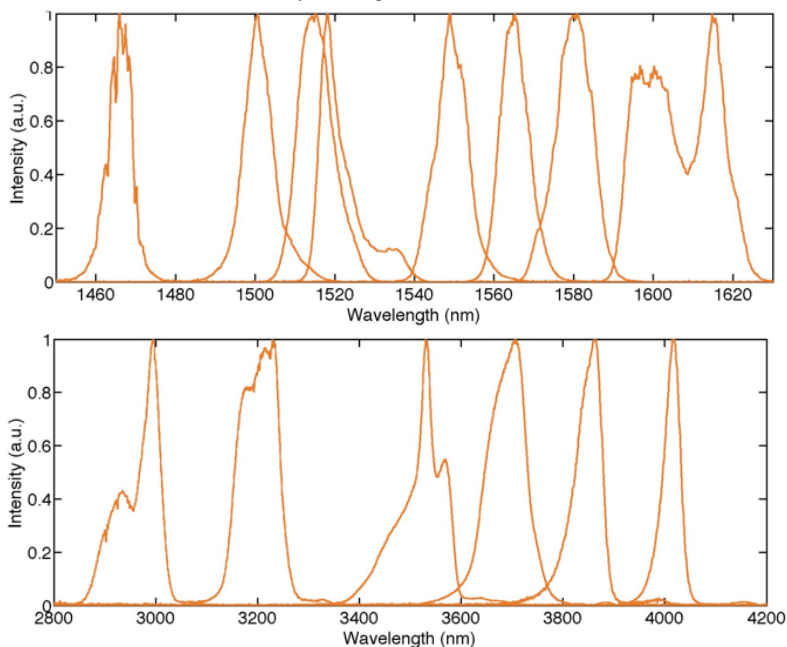
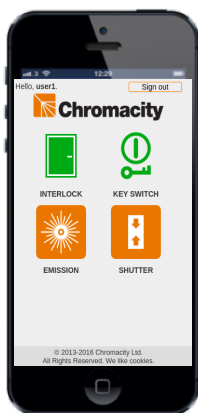


Exceptional tunability and power enabling a broad range of applications

- Quasi-CW output from 1.48 – 4.2  $\mu\text{m}$
- Up to 800 W from signal port and 250 mW from idler port
- Optional 3<sup>rd</sup> output port delivers 500 mW at 1040 nm
- 100 MHz repetition frequency
- Linearly polarized free-space output
- Lock-to-clock option
- 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
- Frequency domain OCT

## 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



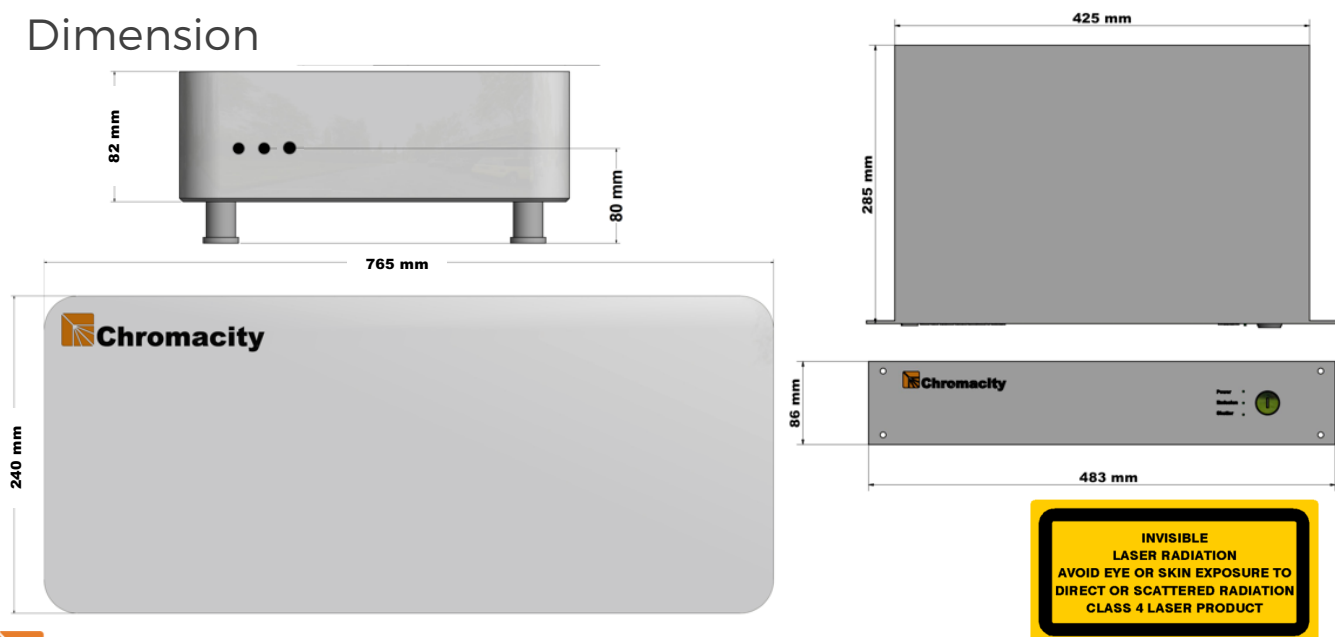
# Specifications and options

## Options

Signal wavelength	1.48 $\mu\text{m}$ – 1.9 $\mu\text{m}$	OPO crystal can be optimized for specific wavelength ranges down to 1.35 $\mu\text{m}$
Signal power	Up to 800mW (@ 1.5 $\mu\text{m}$ )	Power depends on mirror set used, can be customer optimised
Idler wavelength	2.1 $\mu\text{m}$ – 3.6 $\mu\text{m}$	OPO crystal can be optimized for specific wavelength ranges up to 4.2 $\mu\text{m}$
Idler power	Up to 250 mW (@ 3.3 $\mu\text{m}$ )	Power depends on mirror set used, can be customer optimised.
Pump source	Integrated Spark 1040 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	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

## Dimension



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