

Innovative Ultrafast Laser Solutions

cOPA

Fully-Integrated Tunable Ultrafast Source for Microscopy Applications

ADVANTAGES

- All diode and direct diode-pumped
- No intermediate laser-pumped laser needed to pump either oscillator or amplifier stage, thereby improving reliability and performance, reducing cost-of-ownership
- All solid-state construction
- Entire optical system occupies one enclosure to minimize drift
- Computer-control of all major functions via controller touch screen
- Remote control and monitoring via Apple iPhone/iPod App
- One year warranty on entire system including nonlinear crystals

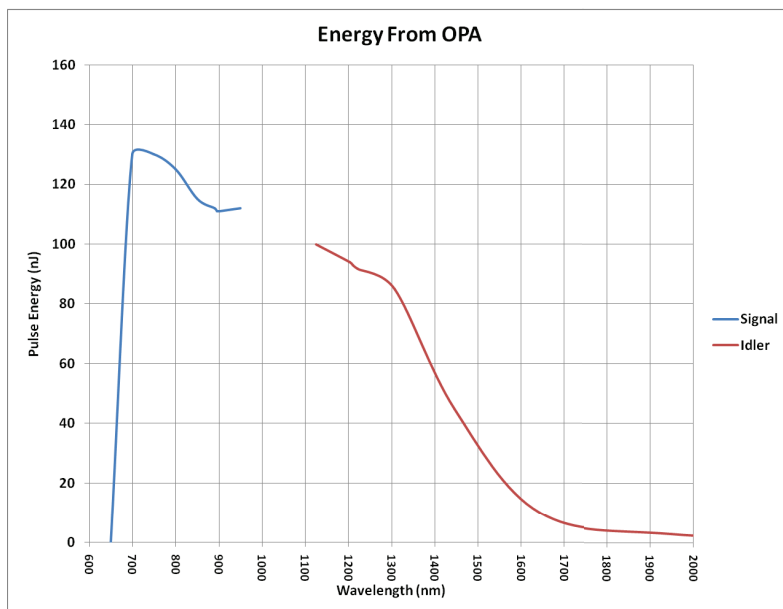


The Model cOPA™ is a unique, three-beam source of ultrashort pulses at MHz repetition rate that operates in the 1-micron wavelength range. It is an ideal source for high repetition rate, 4-wave mixing experiments such as 3D multimodal imaging microscopy in cells and tissue. All three beams are synchronized to less than 10 femtoseconds. Two beams are independently tunable. At more than 100 nJ/pulse, the Model cOPA™ provides enough energy to perform multi-modal microspectroscopy followed by ablative sectioning of tissue samples.

The Model cOPA™ consists of two synchronized optical parametric amplifiers (OPAs) in one enclosure pumped by our Model IMPULSE™ MHz repetition rate, fiber laser oscillator/amplifier system². Each OPA is independently tunable from 700 to 950 nm in the signal range and from 1130 to 1300 nm in the idler range. Residual 1030 nm pump light of > 1 μJ is available from a separate output port. Motorized drives for electronic tuning are included. An optional wavelength extension is available providing tunability from 1125 nm to 1950 nm.

Specifications:

Tuning range	700-950 nm (Signal); 1130-1300 nm (Idler) (>100 nJ/pulse throughout signal range)
Pulse energy	>100 nJ (Signal); >80 nJ at peak (Idler) (Over entire signal tuning range)
Bandwidth	<150 cm ⁻¹ (200 cm ⁻¹ to 250 cm ⁻¹ available at higher power output)
Repetition rate	1 MHz
Compressibility	<1.5 x transform limit
Pulse Energy Noise	<1% rms for f >2 Hz



Notes:

- One-year warranty on entire system including nonlinear crystals.
- Please contact us for more information.



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