

PRODUCT BRIEF

KEY FEATURES

- Tuning range 3.4-4.7 μ m (dependent on pulse duration)
- Pulse width 200fs-300fs (depends on pump laser)
- Total average output power >150mW with 20 MHz rep rate (depends on selected pump laser)
- High beam quality and spatial/spectral coherence

POSSIBLE APPLICATIONS

- Pump for MIR supercontinuum generation
- Pump for MIR NLO experiments
- MIR test and measurement
- Directed Infrared countermeasures

CONTACT

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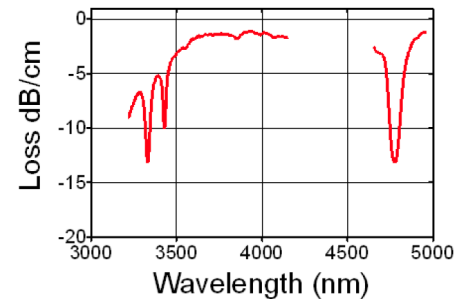
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OVERVIEW

The CUDOS fsec MIR OPA source is based on proven and robust Periodically Poled Lithium Niobate crystals and Nd/Yb solid state laser technology and use a patented mode of operation that enables high power generation of MIR pulses in the 3.5-4.7 μ m region with pulse lengths around 300fs demonstrated to date.

Continuous tunability of the source is possible with high output beam quality (Gaussian $M2 < 2$). The output pulses are also close to transform limited. Alternatively systems can be configured to deliver spot wavelengths within the specified tuning range.

Similar systems can be configured to generate picosecond pulses with reduced bandwidth. These systems can be configured to tune continuously with 1-2cm⁻¹ resolution over a range from <2.9 to \approx 4.3 μ m and 4.6-5 μ m.



PRELIMINARY SPECIFICATIONS

Pulse duration	>200fs
Average power	>150mW
Peak power	\approx 20kW
Wavelengths	3.5-4.7 μ m

PAPER

Pan Ma, Duk-Yong Choi, Yi Yu, Xin Gai, Zhiyong Yang, Sukanta Debbarma, Steve Madden, and Barry Luther-Davies, "Low-loss chalcogenide waveguides for chemical sensing in the mid-infrared," Opt. Express 21, 29927-29937 (2013)



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