

FPPO-fs

Femtosecond Fiber Laser Pumped
Optical Parametric Oscillator



Product Description:

The FPPO-fs is a fiber laser pumped, femtosecond optical parametric oscillator. It provides tunable, 300 fs pulses with nearly continuous spectral coverage from 730-2000 nm. With optional 532 nm and 1064 nm outputs, up to four synchronous pulses are available at once.



Product Specifications:

Parameter	Typical Value
Pulse Duration	< 350 fs
Bandwidth	> 50 cm^{-1}
Time bandwidth product	~ 0.6
Power	100 - 800 mW
Center Wavelength*	730 nm - 1000 nm (signal) 1150 nm - 2000 nm (idler)
M^2	< 1.4
Polarization	linear horizontal
Repetition Rate	110 MHz

*option for 1064 nm and 532 nm pulses available

Tuning Range:

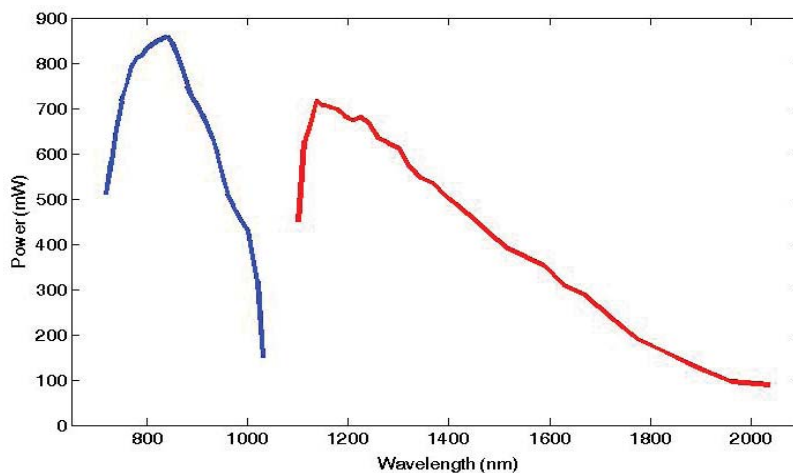


Figure 1. Tuning curve showing output power of signal (blue) and idler (red) pulses. Tuning is done by a combination of crystal temperature and cavity length. Synchronous output of both pulses are available for experiments

Pulse Characteristics:

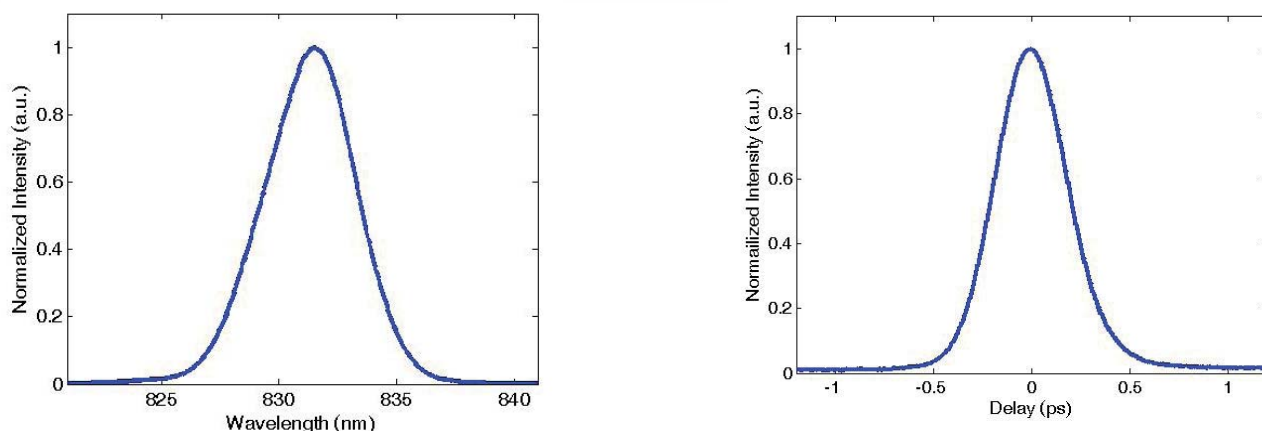


Figure 2. Spectrum (left) and autocorrelation (right) of signal pulse at 831 nm showing the typical bandwidth of 4.5 nm (66 cm^{-1}) and pulse duration of 310 fs.

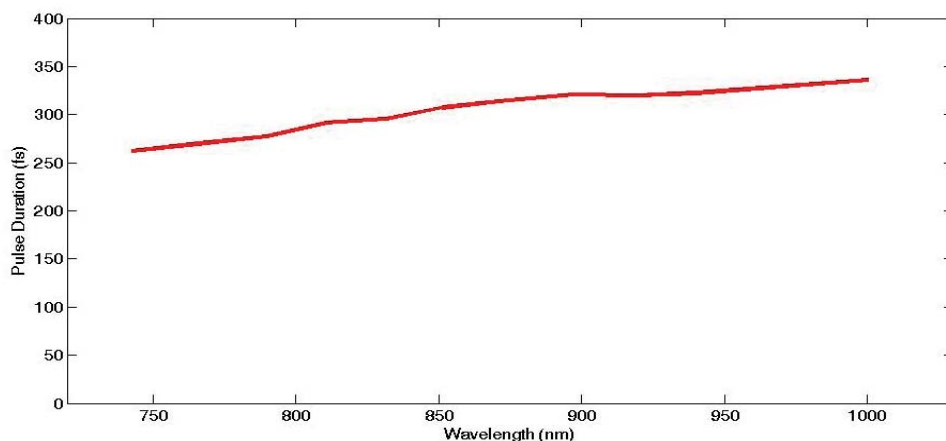


Figure 3. Pulse duration of the signal pulse as it is tuned across its full range.

Applications:

The FPPO-fs provides the user with a flexible laser source that can deliver ultrafast pulses for a broad range of applications including:

- Multiphoton Imaging
- Pump-probe spectroscopy
- Fluorescence spectroscopy
- Raman imaging and spectroscopy