

Ultrafast lasers that simply work

FOR INDUSTRY, SCIENCE AND MEDICINE

# Harmony

Optical Parametric Amplifier



Harmony is a single box optical parametric amplifier that converts ultrafast pulses from Ytterbium-based lasers into broadly tunable pulses with wavelengths ranging from 210 nm up to 11000 nm. It is equipped with an integrated mini spectrometer and can be automatically tuned in the base wavelength range of 630 - 2600 nm with intuitive user-friendly PC software. It is designed to operate from single pulse up to 200 kHz repetition rate and pump pulse energy as low as 35  $\mu$ J. Harmony can be compatible with all Ytterbium-based femtosecond lasers, but it works best with Jasper family femtosecond fiber lasers featuring an exceptional beam pointing stability.

**Technical specification:**

	Harmony Basic	Harmony Ultra Tune
Number of outputs	Multiple, as per table below	Custom solution tailored to your requirement
Pulse duration of Signal	< 200 fs	Ask for details
Signal bandwidth	< 250 cm <sup>-1</sup>	
Polarization	Linear, horizontal	
Beam quality (M <sup>2</sup> )	< 1.5*	
Size	760 (L) x 420 (W) x 74 (H) mm <sup>3</sup>	

**Not exactly what you are looking for?  
Get in touch with us and let us help you out.**

**Performance and tuning:**

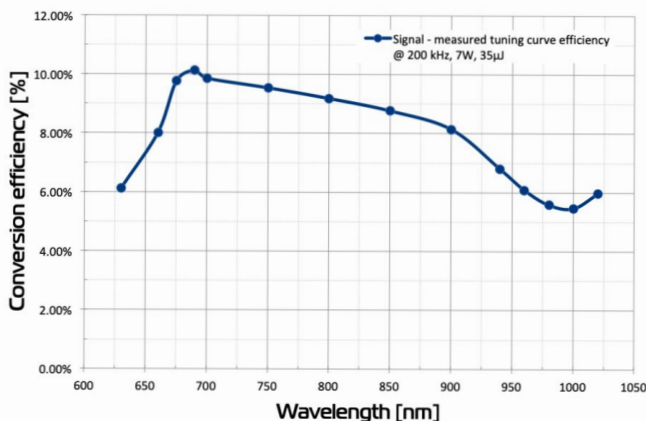
Output	Tuning range	Conversion efficiency**
Signal (S) and Idler (I)	630 – 1030 nm and 1030 – 2600 nm	> 4% across tuning range 9% at peak of tuning range
Optional SH of S & I	315 – 510 nm and 520 – 630 nm	> 2% at peak of tuning range
Optional FH of S & I	210 – 250 nm and 260 – 310 nm	> 0.5% at peak of tuning range
Optional SH of Pump	fixed 515 ± 3 nm	> 40%***
Optional FH of Pump	fixed 257 ± 2 nm	> 5%***
Optional IR extension	2600 - 11000 nm	Ask for details

\* - for signal and Idler

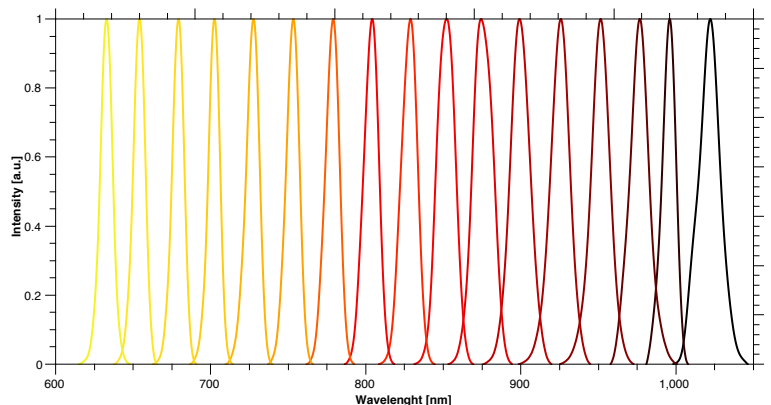
\*\* - combined signal and idler with respect to input pump laser average power at 200 kHz. SH – second harmonic, TH – third harmonic, FH – fourth harmonic

\*\*\* - BOL - beginning of lifetime

**Fluence Harmony typical tuning curve**



**Typical Spectra from Fluence Harmony**



All dimensions in mm

All specifications are subject to change without prior notice due to continuous improvements.



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