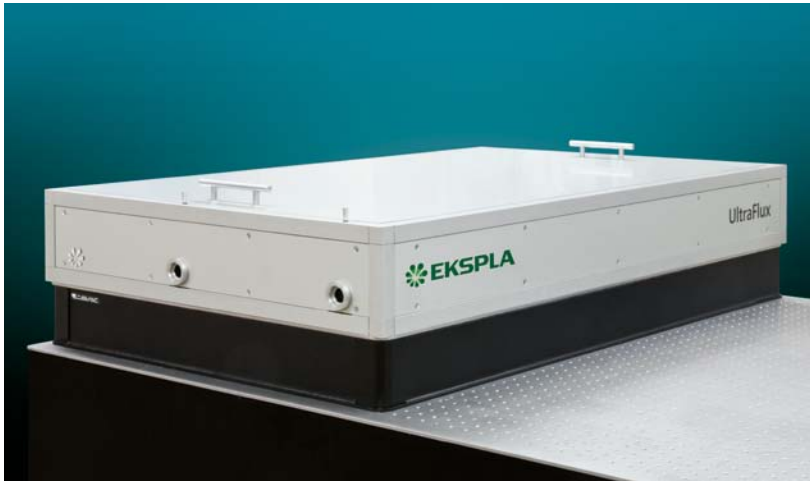


Femtosecond Laser UltraFlux

Tunable Wavelength Femtosecond Laser System



UltraFlux is the first compact high energy tuneable wavelength femtosecond laser system which incorporates the advantages of ultrafast fiber laser, solid-state and parametric amplification technologies in less than 1 square meter footprint box. Patent pending (application No. EP2924500) OPCPA front end technology uses the same picosecond fiber laser for seeding both picosecond DPSS pump laser and femtosecond parametric amplifier by spectrally broadened output. This approach greatly simplifies the system – excludes femtosecond regenerative amplifier and eliminates the need of pump and seed pulse synchronization. In addition to that, contrast of the output pulses in picosecond to nanosecond time scale is potentially increased.

System generates 35 fs pulses, which can be automatically tuned in 710 – 960 nm wavelength range. Less than 10 fs pulses are obtained in a few-cycle operating regime. Up to 0.3 mJ output pulse energy with better than 1% pulse-to-pulse stability at 1 kHz repetition rate is achieved by using a state of the art OPCPA technology.

By incorporating parametric amplifier technology together with a novel ultrafast fiber laser helped to create and bring to the market a new tool for femtosecond pump-probe, nonlinear spectroscopy, emerging high harmonic generation experiments and other femtosecond and nonlinear spectroscopy applications. With this laser ultrafast science breakthrough is closer to any photonics lab than ever before.

FEATURES

- ▶ *Patented front-end design (patents no. EP2827461 and EP2924500)*
- ▶ *Based on the novel OPCPA (Optical Parametric Chirped Pulse Amplification) technology – simple and cost-efficient operation*
- ▶ *Hands free wavelength tuning from 710 to 960 nm*
- ▶ *35 – 55 fs pulse duration (10 fs is available)*
- ▶ *1 kHz repetition rate*
- ▶ *0.3 mJ pulse energy*
- ▶ *Excellent pulse energy stability: < 1 %*
- ▶ *Small footprint*
- ▶ *Compact picosecond pump laser*

APPLICATIONS

- ▶ *Femtosecond pump-probe spectroscopy*
- ▶ *Nonlinear spectroscopy*
- ▶ *High harmonic generation*
- ▶ *Your application is welcome*

OPTIONS

- ▶ *Amplified and compressed supercontinuum output (1 μ J, 10 fs, 680 – 960 nm)*
- ▶ *Second harmonics: 355 – 470 nm*
- ▶ *Third harmonics: 237 – 312 nm*

SPECIFICATIONS ¹⁾

Model	UltraFlux FT2101
Max. pulse energy ²⁾	0.3 mJ
Tunability	710 – 960 nm
Pulse duration ³⁾	35 – 55 fs
Pulse repetition rate	1 kHz
Pulse stability	<1% rms
Footprint	1.2 × 0.75 m

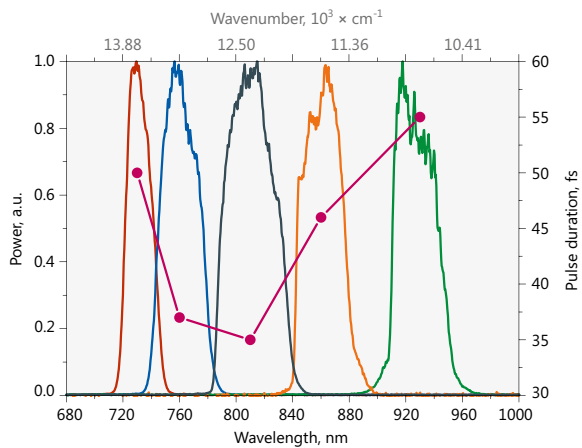
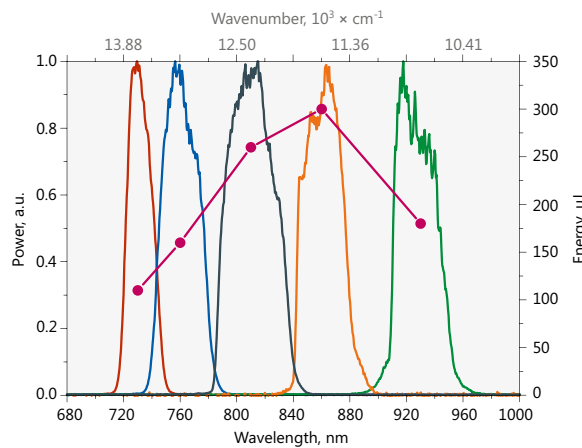
¹⁾ Due to continuous improvement, all specifications are subject to change without notice. Parameters marked typical may vary with each unit we manufacture.

²⁾ Inquire for higher energy options.

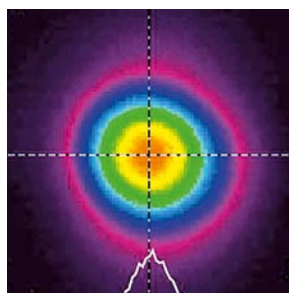
³⁾ 10 fs is available. Contact Ekspla for pulse energy and other specifications.



PERFORMANCE



BEAM PROFILE



Typical beam profile.
Output pulse energy 0.3 mJ