

FEMTOSECOND LASERS FX

FEATURES: The family of the FX series lasers is completely solid-state femtosecond lasers with high average power, exceptional pulse energy and excellent stability.

- AIR COOLED
- COMPLETELY SOLID-STATE
- COMPACT DUSTPROOF DESIGN
- ≤ 200 FS PULSE DURATION (120 FS IS AVAILABLE)
- EXCELLENT STABILITY
- VIS AND UV OPTIONS
- TURN-KEY OPERATION



DESCRIPTION



Yb-doped crystals used in these lasers allow being pumped directly by a diode eliminating the necessity in an intermediary pump laser used in traditional Ti:Sapphire lasers. For this reason the FX series lasers to the full extent combine compactness and reliability of fiber systems with advantages of solid-state technologies.

The FX series lasers have been developed specially for long-term and stable operation with minimum of service. The lasers are built on the turn-key principle and can be operated by a user not experienced in working with laser equipment.

Unpretentiousness of the FX series lasers is conditioned by the rigid dustproof design with thermal stabilization of all the critical cavity components. Supplement these features with service intervals of more than 10 000 hours and obtain a device which will be duly appreciated by industrial users.

Excellent beam quality will satisfy the most demanding requirements of scientists performing fine experiments. Thanks to the SESAM® technology you will daily save your time due to self-start of the femtosecond mode immediately after switching on the laser and will be sure in the precision of your experiments thanks to ideal long-term stability of the laser output parameters.

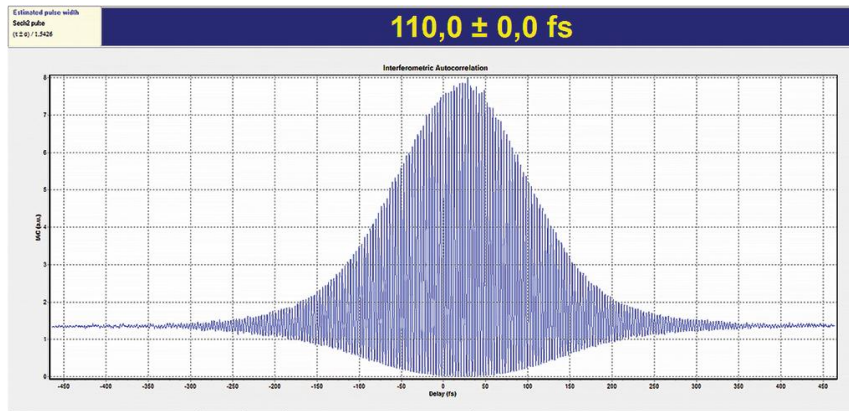
If you need to use the laser you already have in your laboratory for applications requiring VIS or UV femtosecond radiation, it can be supplemented with the SHG (518nm), THG (345nm) or FHG (259nm).

SPECIFICATIONS

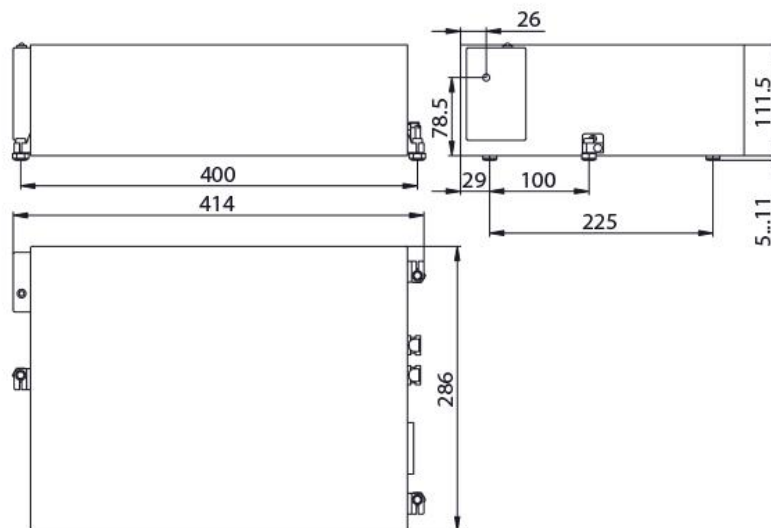
MODEL	FX 100	FX 200-5	FX 200-7	FX 200-8
Wavelength, nm 1)	1040 ± 5	1030 ± 5	1030 ± 5	1030 ± 5
Average output power, W	≥ 1	≥ 5	≥ 7	≥ 8
Pulse energy, nJ	≥ 10	≥ 70	≥ 100	≥ 110
Pulse repetition rate, MHz	70 ± 5			
Pulsewidth, fs	≤ 150	≤ 150	≤ 150	≤ 150
Spectrum width (FWHM), nm	≥ 8	≥ 8	≥ 8	≥ 8
Beam quality	TEM00; M2 ≤ 1.2			
Power stability, % 2)	± 1	± 0.5		
Cooling	Air cooling		Water-to-air	
Electrical service	100-240 V, 50 Hz, ≤ 600 W			
Dimensions (L×W×H), mm	670x220x155		400x290x120	
Laser head	240x240x110		410x420x170	
Power supply				

Specifications are subject to change without notice

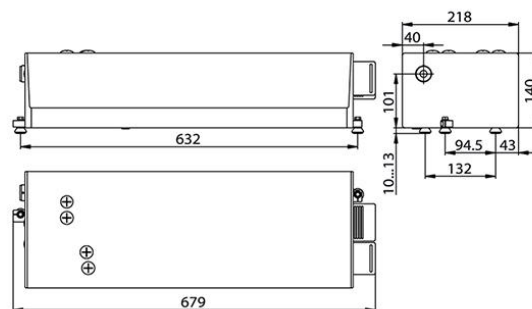
- 1) Second, third and fourth harmonics are available upon request.
- 2) Within 12 hours after warm-up under stable environmental conditions.



The FX200 laser typical autocorrelation curve



The FX200 lasers head outline drawing



The FX100 lasers head outline drawing

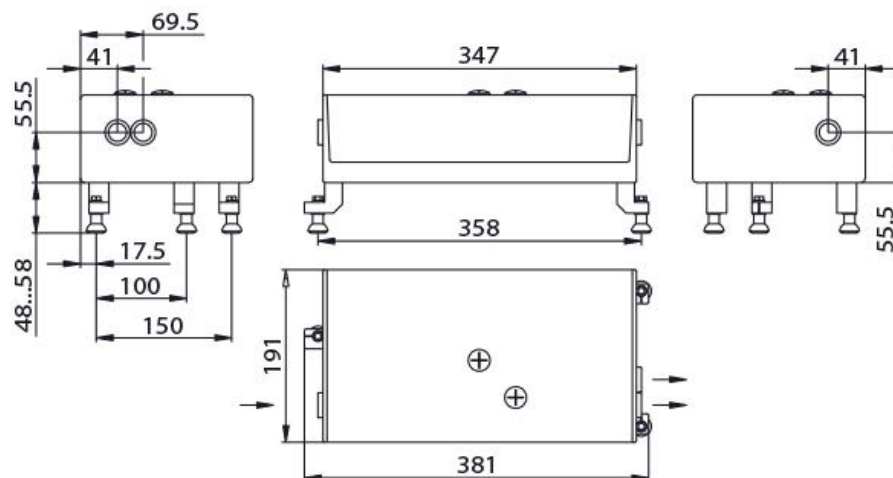
OPTIONS & ACCESSORIES

- External harmonic generators
- External Attenuator
- Frequency divider

HARMONIC GENERATORS



In the standard configuration the FX series lasers does not have built-in harmonic generators. However, upon your request the SHG, THG and FHG can be supplied as a stand-alone modules series FG.



The FG130 harmonic generator outline drawing

APPLICATIONS

- Femtosecond spectroscopy
- Nonlinear spectroscopy
- Nonlinear optics
- High harmonics generation
- Terahertz generation and detection
- Multiphoton microscopy

