

COMPACT FEMTOSECOND Yb:KYW LASERS

FX series

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



Yb-doped KYW 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 FX100 and FX200 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 stabilisation 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).

FEATURES

- 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

APPLICATIONS

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

SPECIFICATIONS *

Model		FX100	FX200
Laser material		Yb:KYW	
Average output power, W	1035 nm ¹⁾	1	8
	518 nm	0.4	4
	345 nm	0.2	2
	259 nm	0.1	1
Pulse energy, nJ ²⁾		15	100
Pulse repetition rate, MHz ³⁾		70	
Pulsewidth, fs ⁴⁾		200	
Beam quality		TEM ₀₀ ; M ² ≤ 1.5	
Power stability, %		±1	
Electrical service		100...240 V, 50/60 Hz, ≤ 500 W	
Dimensions, mm:			
Laser Head (LxWxH)		670 x 220 x 155	400 x 290 x 120
Power Supply (HxWxD)		240 x 240 x 110	325 x 290 x 135

* Specifications are subject to change without notice.

1) The output wavelength is fixed within the range of 1035 ± 10 nm.

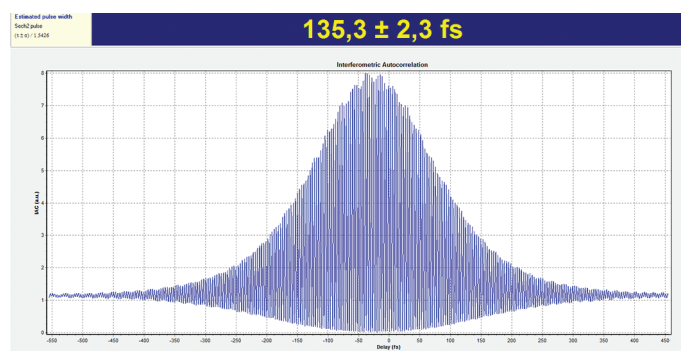
2) Specified at 1035 nm.

3) Other PRR values can be provided upon request.

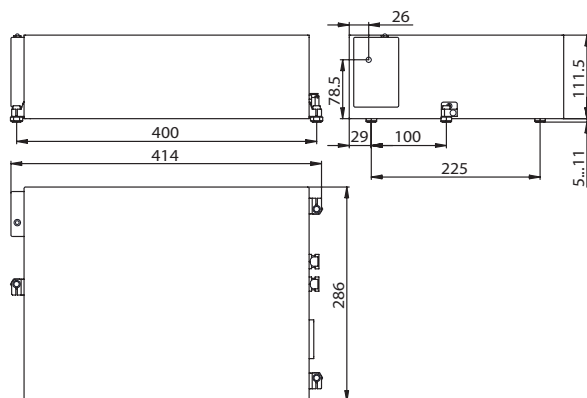
4) Pulsewidth within 120...200 fs is available.



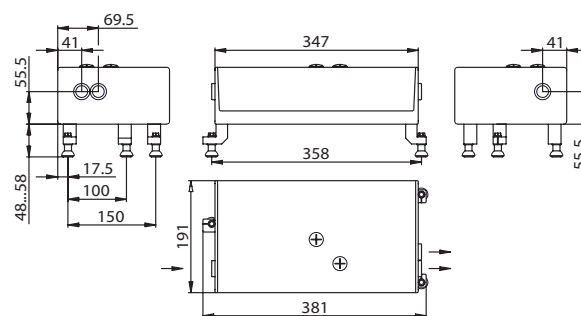
The FX series lasers can be supplemented with the VIS / UV harmonic generator unit.



The FX100 laser typical autocorrelation curve.



The FX200 laser head outline drawing.



The FG130 harmonic generator outline drawing.