



## EFOA-SH. Femtosecond Er Fiber Laser with Built-in SHG

- 780 nm wavelength
- >3 nJ @ 780 nm pulse energy
- Down to 80 fs typical pulse duration
- Small footprint, turn-key operation
- Highly stable PM scheme for 24/7 operation



EFOA-SH ultrafast fiber laser system with SHG

### Product overview

Second harmonic of Er-doped fiber laser operates at wavelength of 780 nm and in a number of applications can replace the powerful yet less reliable solid-state Ti:S lasers. Easy to use design, turn-key operation, small footprint greatly facilitate any research in which the laser is involved. Lack of laser experience is not a problem with the fiber lasers, only general electronics and light physics knowledge is required to work with the unit.

EFOA-SH is also a perfect source for amplifier system seeding due to one-box compact design and lack of expensive pump laser as in case of Ti:S solid-state seed. The EFOA-SH is based on PM-fiber scheme providing best stability and reliability values.

### EFOA-SH technical specifications

	EFOA-SH	EFOA-SH-HP
Pulse Width (FWHM) at 780 nm	<100* fs (typ. 85 fs)	<120 fs (typ. 100 fs)
Wavelength (fixed, switchable**)	780±5 nm and 1560±10 nm	
Repetition rate (fixed)***	100±5 MHz (50-250 MHz optionally)	
Outputs		
Power output (switchable**), free-space	>140 mW at 780 nm >260 mW at 1560 nm	>200 mW at 780 nm >440 mW at 1560 nm
Long-term output power stability (8 h, ±1° C)	<1 % rms at 780 nm <0.5% rms at 1560 nm	
Spatial mode	TEM00, M^2 <1.2	
Beam divergence	<1 mrad at 780 nm <2 mrad at 1560 nm	
Polarization	linear	
Service optical output	1560 nm, FC/APC (~1 mW)	
RF sync output	SMA connector	
Mode-lock status	SMA connector (3.5/0 V) and LED	
General specs		
Operating temperature	22±5 °C	
Warm up time for rated accuracy	20 min	
Power supply	110...220 V, 50/60 Hz	
Dimensions, mm		
Laser head	278x242x111	320x260x120
Control unit	291x202x134	470x385x160

\* - <80 fs pulse duration is available upon request;  
\*\* - simultaneous dual output is also possible upon request;  
\*\*\* - chosen at order, 100-MHz configuration is also available; other values upon separate request.

### Applications:

- Amplifier systems seeding
- Terahertz generation and detection
- Multi-photon microscopy
- Ultrafast spectroscopy
- Semiconductor device characterization
- Supercontinuum generation
- Optical coherence tomography
- Telecommunications
- Optical metrology



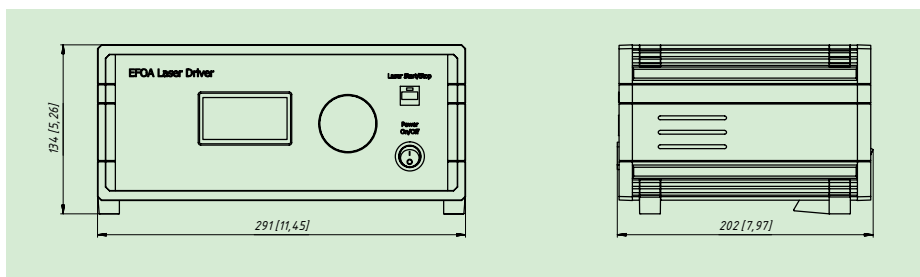
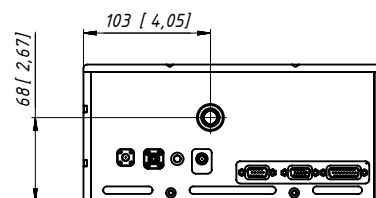
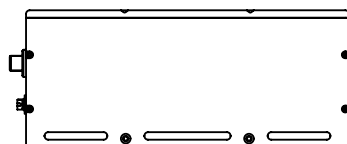
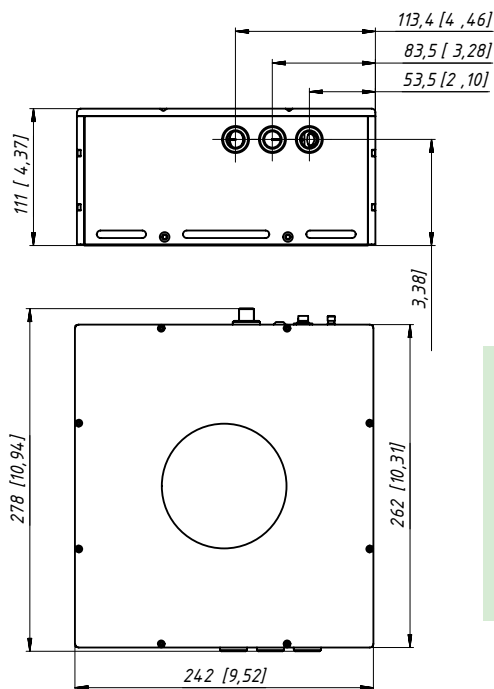
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LASERS AND OPTICAL SYSTEMS

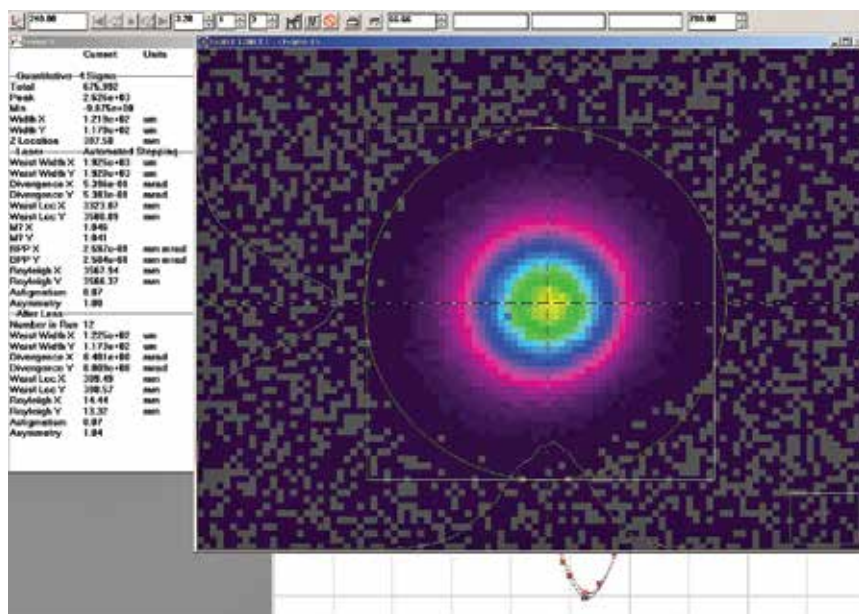


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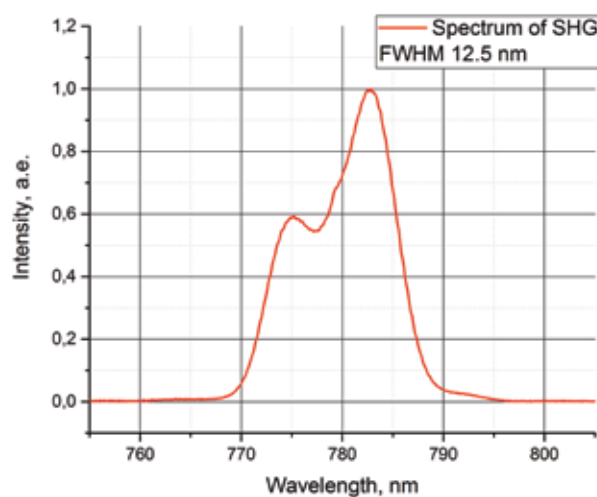
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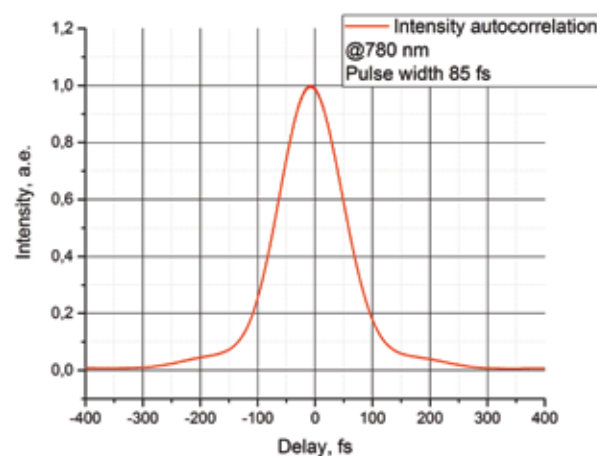
EFOA-SH optical head and PSU (mm [inches])



EFOA-SH beam shape, divergence and  $M^2$  measurements at 780 nm



Typical spectrum of the EFOA-SH laser system



EFOA-SH autocorrelation trace at 780 nm