



## 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
<b>Pulse Width (FWHM) at 780 nm</b>	<100* fs (typ. 85 fs)	<120 fs (typ. 100 fs)
<b>Wavelength (fixed, switchable**)</b>	780±5 nm and 1560±10 nm	
<b>Repetition rate (fixed)***</b>	65±5 or 80±5 MHz	
<b>Outputs</b>		
<b>Power output (switchable**), free-space</b>	>140 mW at 780 nm >260 mW at 1560 nm	>200 mW at 780 nm >440 mW at 1560 nm
<b>Long-term output power stability (8 h, ±1° C)</b>	<1 % rms at 780 nm <0.5% rms at 1560 nm	
<b>Spatial mode</b>	TEM <sub>00</sub> , M <sup>2</sup> <1.2	
<b>Beam divergence</b>	<1 mrad at 780 nm <2 mrad at 1560 nm	
<b>Polarization</b>	linear	
<b>Service optical output</b>	1560 nm, FC/APC (~1 mW)	
<b>RF sync output</b>	SMA connector	
<b>Mode-lock status</b>	SMA connector (3.5/0 V) and LED	
<b>General specs</b>		
<b>Operating temperature</b>	22±5 °C	
<b>Warm up time for rated accuracy</b>	20 min	
<b>Power supply</b>	110...220 V, 50/60 Hz	
<b>Dimensions, mm</b>		
<b>Laser head</b>	278x242x111	320x260x120
<b>Control unit</b>	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



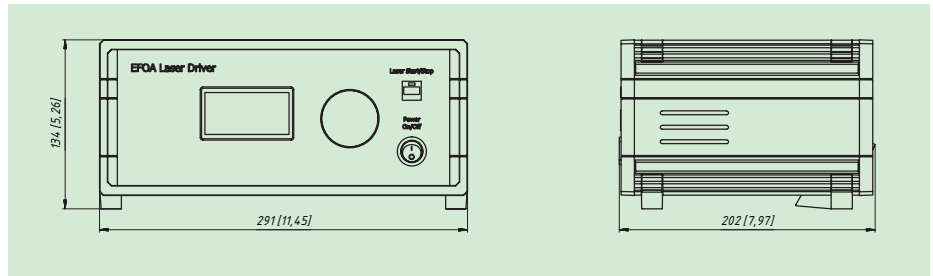
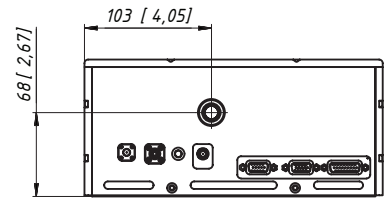
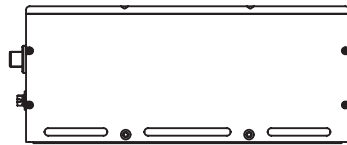
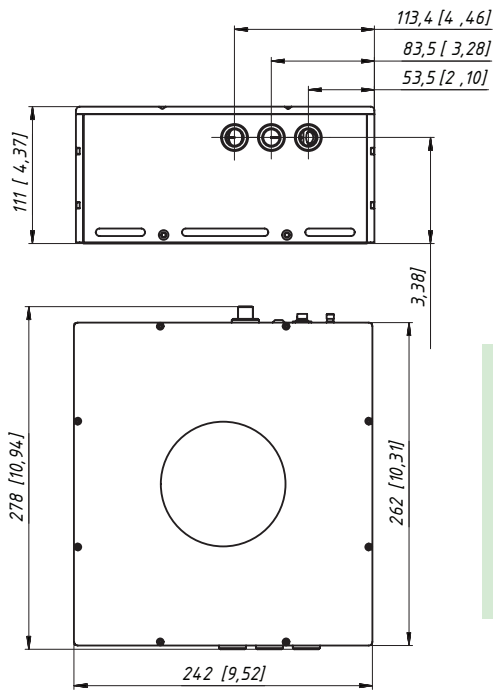
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LASERS AND OPTICAL SYSTEMS

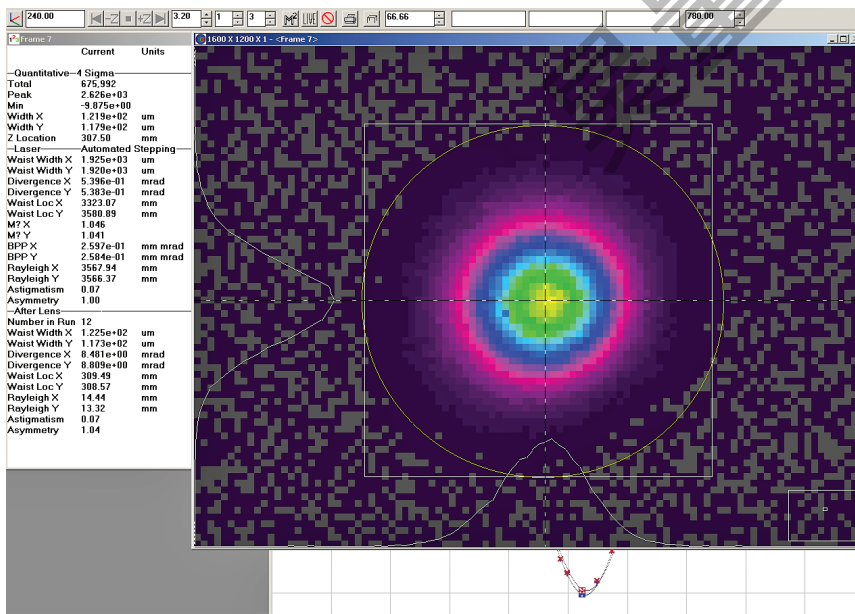


Avesta Ltd., 11 Fizicheskaya Street  
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Tel.: +7 (495) 967-94-73  
Fax: +7 (495) 646-04-95

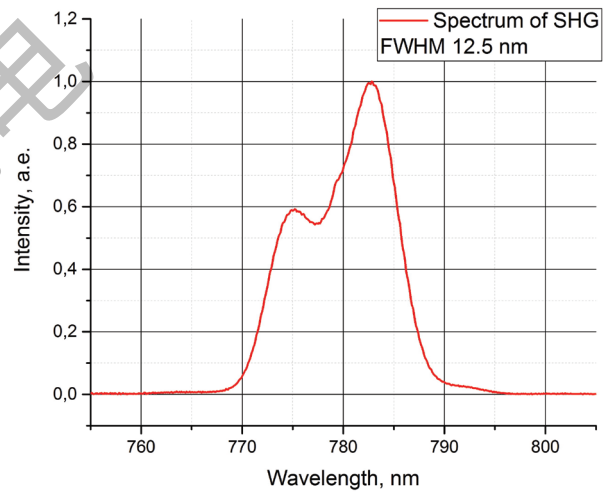
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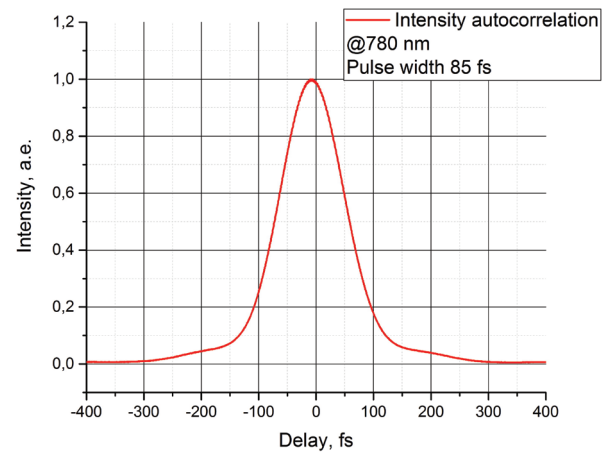
EFOA-SH optical head and PSU (mm [inches])



EFOA-SH beam shape, divergence and M<sup>2</sup> measurements at 780 nm



Typical spectrum of the EFOA-SH Laser system



EFOA-SH autocorrelation trace at 780 nm

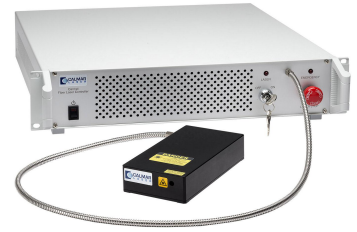
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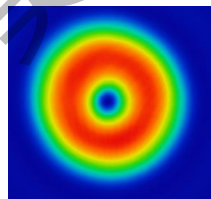
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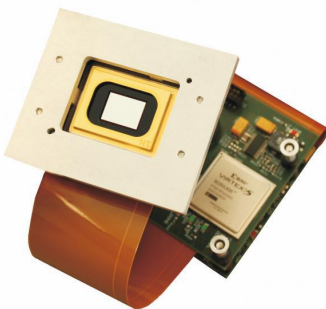
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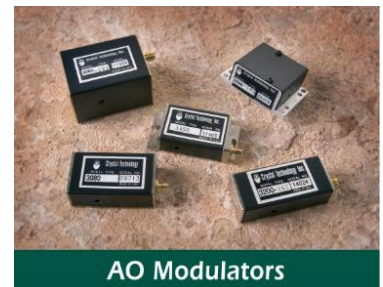
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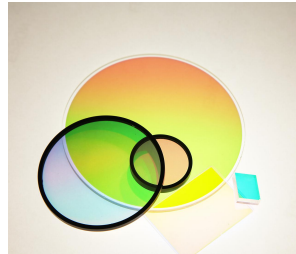
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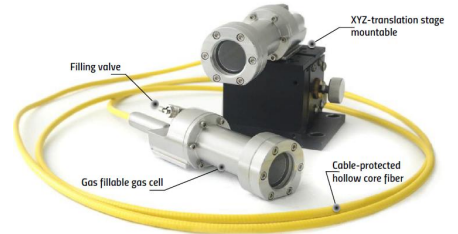
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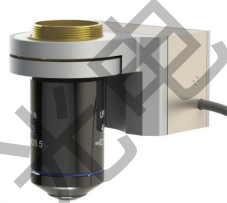
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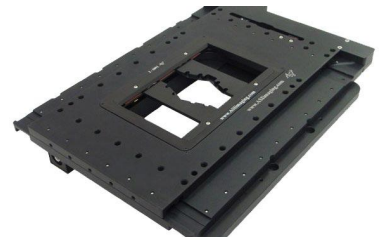
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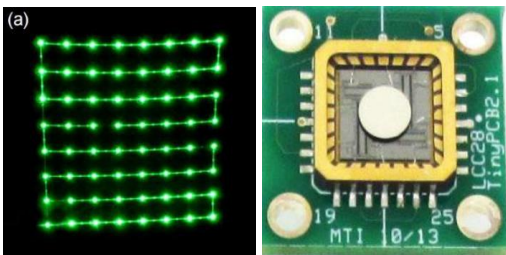
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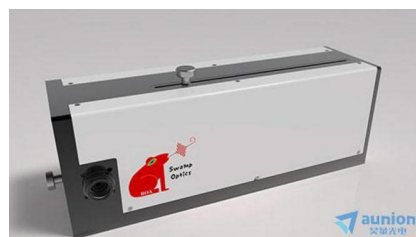
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