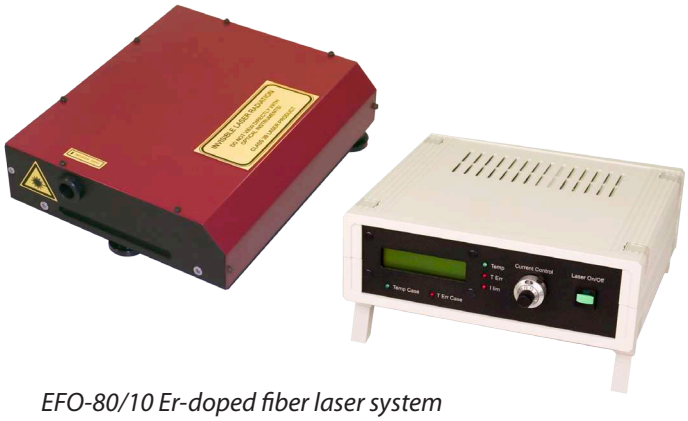
EFO. Femtosecond Er-doped Fiber Laser

- Ultrashort pulse duration down to 50 fs
- Up to 5 W ouptut power at 1560 nm
- Small footprint and high stability
- Turn-key operation
- Optional benchtop version



EFO-80/10 Er-doped fiber laser system

Product overview

Fiber-based femtosecond lasers offer robust and stable operation without the need for constant realignment. The low cost and stability of fiber-based femtosecond lasers mean that even beginner research labs can have a femtosecond pulse source without the need for expensive or complicated equipment. This brings ultrafast research into the realm of undergraduate and other educational environments.

With pulse lengths of 100 fs at 1550 nm fiber femtosecond lasers can also be used as seed sources for femtosecond amplifiers. The 1550 nm wavelength of Er-doped fiber lasers also makes them an attractive tool for ultrahigh-speed optical communications applications.

EFO technical specifications

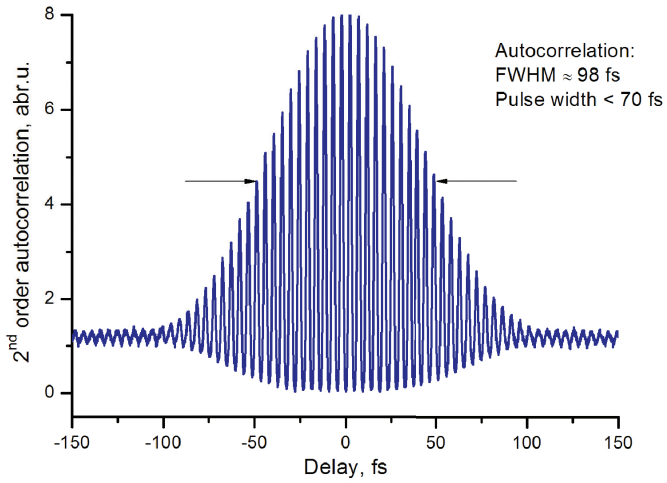
	EFO-80/10	EFOA-120/100	EFOA-100/260	EFOA-100/440	EFOA-300/2000
Wavelength (fixed)	1560±10 nm				
Repetition rate (fixed)	65±5 or 80±5 MHz (100±5 MHz upon request)				
Pulse duration* (fixed)	<80 fs	<120 fs	<100 fs	<100 fs	<300** fs
Average output power	>10 mW	>100 mW	>260 mW	>440 mW	>2** W
Polarization, linear	vertical	horizontal	horizontal	horizontal	horizontal
Output type	collimated free-space, TEMoo (fiber-coupled output upon request, output pulse energy limited to 1.2 nJ)				
Long-term power stability (8 h, at equal ambient temp.)	<0.5% rms				<1% rms
RF sync output	SMA connector (200-300 mV @ 50 ohm load)				
Mode-lock status	SMA connector (3.5/0 V) and LED				
Service optical output	FC/APC (~1 mW)				
Laser head dimensions, mm	180x210x50(70)		180x210x70(90)	180x210x70(90)	380x250x120
Power supply unit dimensions, mm	230x200x85		230x200x130	230x200x130	470x385x155

** - 50 fs to 5 ps customization upon request for certain power ratings, please enquire;*
*** - <100 fs, 2.5 W upon request; up to 5 W upon request.*

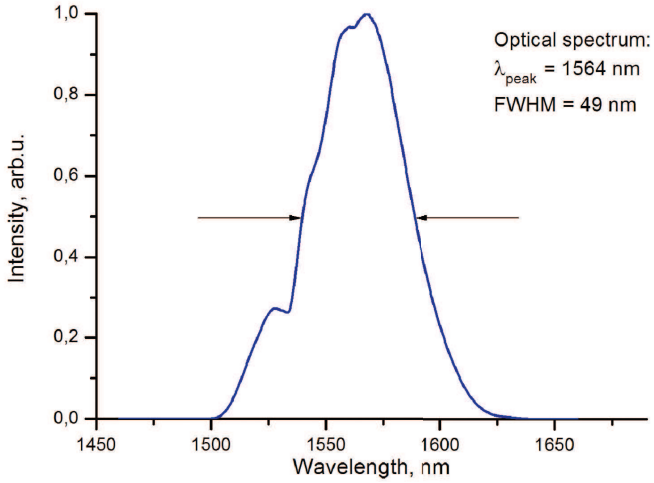
Possible application of the EFO fiber lasers:

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

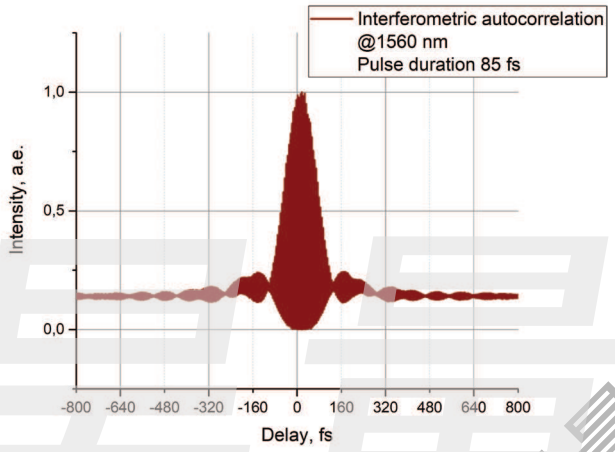
AVESTA



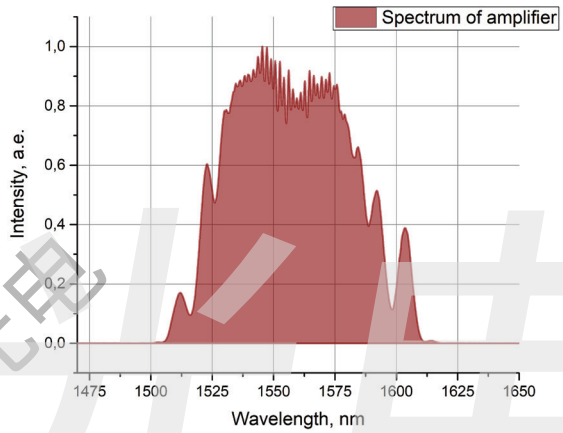
EFO-80/10 typical autocorrelation trace



Typical spectrum of an EFO laser system

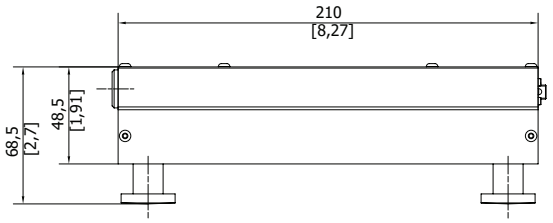


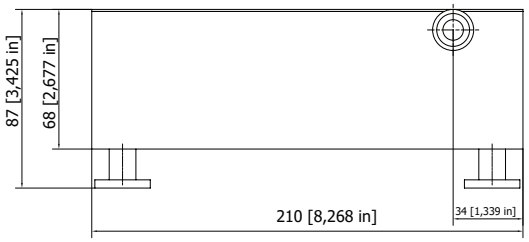
EFOA-100/260 typical autocorrelation trace

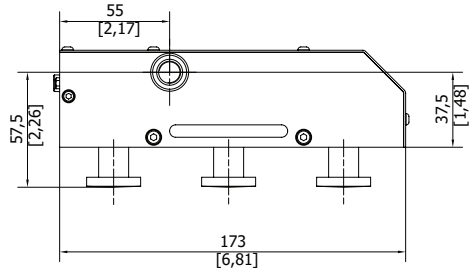


Typical spectrum of an EFOA laser system

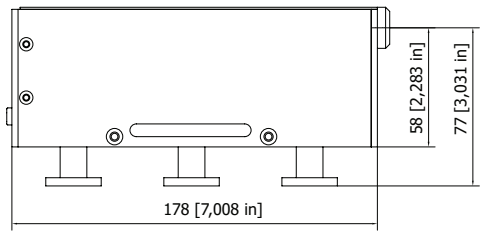
EFO dimensions







EFO-80/10 optical head (mm [inches])



EFOA optical head (mm [inches])