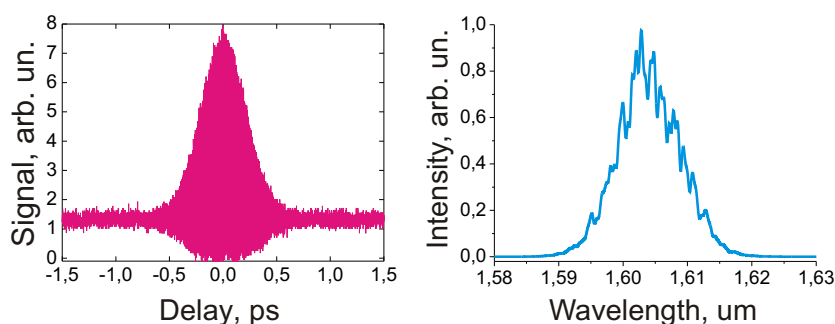


Femtosecond Er-doped fiber laser, model "Erbius-Femto"



Laser **Erbius-Femto** features a specially chosen working spectral range shifted into longer wavelengths in comparison to the standard 1.55- μm range of erbium lasers. The second harmonic of radiation from **Erbius-Femto** at 800 nm precisely corresponds to the maximum of the Ti-Sa laser gain contour. This is why our unique laser **Erbius-Femto** may be an efficient replacement of femtosecond Ti-Sa lasers in a number of applications. Another advantage of **Erbius-Femto** is its high output radiation power, reaching 250 mW without any additional amplification.

Complemented by an optical amplification system, **Erbius-Femto** can deliver pulses with energy up to 200 nJ and considerable peak power (up to 550 kW), comparable to the capacity of a large diesel power station. Intense ultra-fast radiation pulses of **Erbius-Femto** enable numerous leading-edge technologies within the realm of ultra-fast photonics.



Erbius-Femto: measured interferometric autocorrelation (left) and power spectrum for 270-femtosecond pulses

Laser **Erbius-Femto** may be shipped together with a fibre optical amplifier to increase the average output power up to 3 W and even more, an efficient radiation frequency doubler for generation of ultra-fast light pulses in the 800-nm range, and a scanned auto-correlator FS-PS-Auto that allows measurement of ultra-fast pulse duration within the range of 10 fs to 30 ps (all by TekhnoScan).

Applications:

- ultrafast spectroscopy
- terahertz generation
- frequency combs
- microfabrication
- waveguide writing
- 3-D photopolymerization
- localized material deposition
- nano-photonics
- high-resolution multiphoton tomography and non-linear imaging research
- real-time diagnostics for microprocessing



- telecommunications
- photochemistry and biology
- FRET analysis
- parameters characterization of biological and photonics materials
- microsurgery
- nano-medicine
- optical DNA sensing technology
- optical measurements in combusting flows and sprays
- high capacity optical data storage
- amplifier seeding
- sub-systems for OEM integration

Features:

Turnkey operation
Robust, reliable
User-friendly

Erbius-Femto

Femtosecond Er-doped all-fiber laser

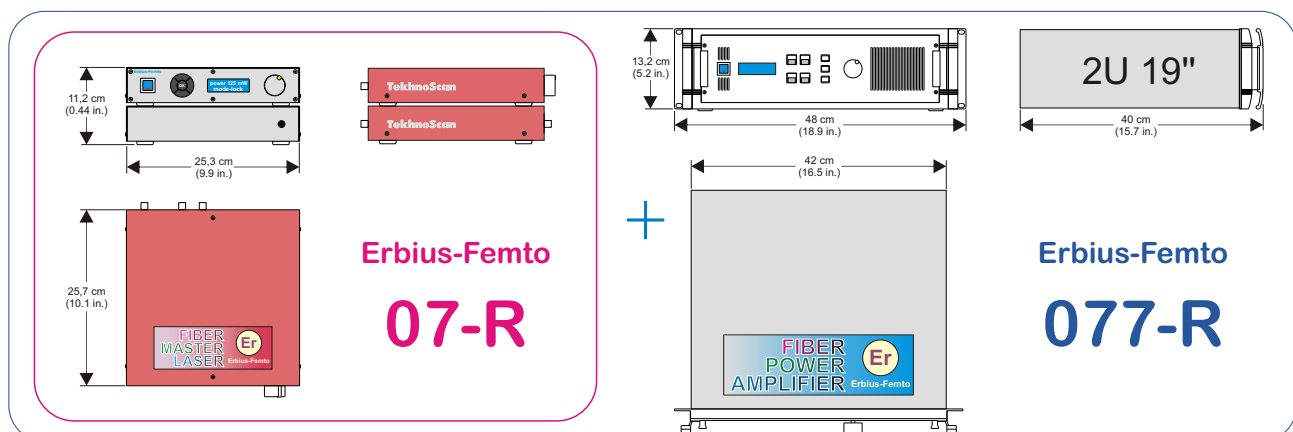
Specifications:

	Master Oscillator, model "Erbius-Femto-07"		Master Oscillator & Power Amplifier, model "Erbius-Femto-077"	
	07-R	07-SH	077-R	077-SH
Wavelength*	1600 ± 10 nm	800 ± 5 nm	1600 ± 10 nm	800 ± 5 nm
Average Output, max	250 mW	75 mW	3 W	1 W
Pulse Width	< 300 fs		< 350 fs	
Pulse Energy, max	20 nJ	6 nJ	200 nJ	60 nJ
Peak Power, max	65 kW	20 kW	550 kW	170 kW
Repetition Rate*	12 – 18 MHz			
Polarization	Linearly polarized			
Output Port	PM fiber, FC/APC	free space	PM fiber, FC/APC	free space

*conventional wavelengths of 1550 & 775 nm are also available

*other repetition rates on request

Operating Voltage & Frequency 110/115/230 VAC, 50 to 60 Hz
Cooling Requirements no water cooling is required
Laser Diode Stabilization temperature stabilized
Range of Operating Temperature 15-28 °C



Information and specifications contained herein are deemed to be reliable and accurate as of the publication date. Tekhnoscan reserves the right to change these specifications at any time without notice.



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