



activefiber
systems

Customized Q-switch & QCW Thulium lasers

A central emission wavelength of 2 μm generated by Thulium-doped fiber amplifiers has enabled a multitude of new applications. AFS offers the highest performance among commercially available 2- μm fiber-based pulsed laser systems.

AFS fiber lasers are characterized by an outstanding performance combined with flexibility and maximum stability. All essential parameters are software controlled and can be tuned over a wide range, making them an extremely valuable tool in many applications.



APPLICATION EXAMPLES

- Materials processing
- Medical treatments (e.g. Lithotripsy)

MORE INFORMATION

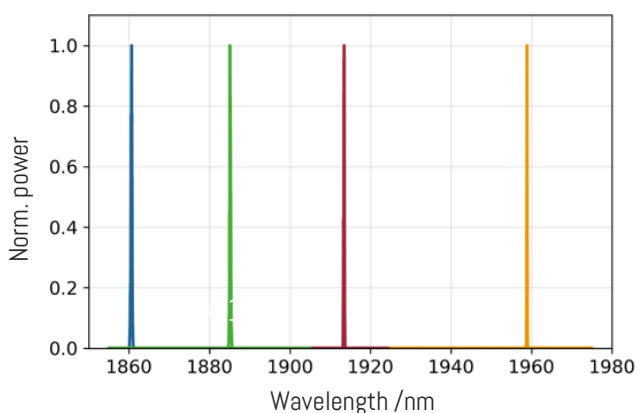
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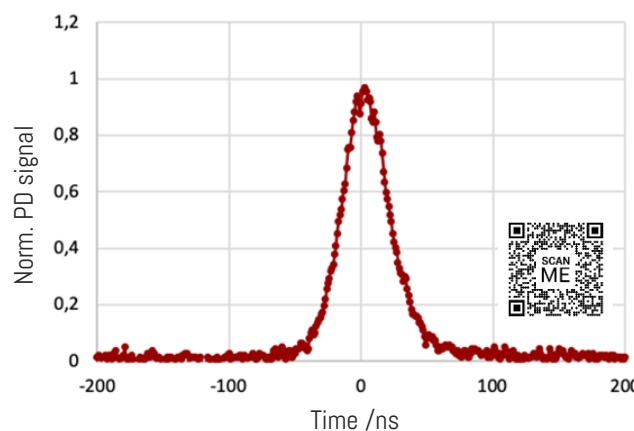
Customized Q-switch & QCW Thulium lasers

	Thulium-Q-switch	Thulium-QCW
Central wavelength	1860 nm...2000 nm	approx. 1940 nm
Repetition rate	20kHz	cw ... 1 kHz
Pulse energy	up to 500 μ J	up to 50 J
Peak power	up to 10 kW	up to 500 W
Average power	up tp 10 W	up to 100 W
Pulse duration	<50 ns	0.25 ms ... cw
Polarization	linear	
Beam quality	close to diffraction-limited, $M^2 < 1.2$	
Beam diameter	customizable, usually ~2.5mm ($1/e^2$ intensity)	
Beam pointing	< 20 μ rad RMS (< 10% nat. divergence)	
Dimensions laser (W \times D \times H)	50 cm \times 40 cm \times 25 cm, packaging can be modified	
Logging	Logging of all operation parameters via control software, remote monitoring and service access	
Additional features	Turnkey reliability, all parameters software controlled, temperature-stabilized and dust-sealed housing	

The specs above show only our main Q-switch and QCW configurations. We happily customize a system exactly to your needs.



Examples for narrow-linewidth Q-switch operation
Modes, tunable in a wide spectral range.



Q-switch output pulse with 42 ns duration at
>500 μ J pulse energy