



**activefiber**  
systems

## CUSTOMIZED Q-SWITCH & QCW THULIUM LASERS

The central emission wavelength of 2 $\mu$ m generated by Thulium-based fiber amplifiers has enabled a multitude of new applications. AFS offers the highest performance among commercially available 2- $\mu$ m fiber-based pulsed laser systems. Our 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

[www.afs-jena.de](http://www.afs-jena.de) | [sales@afs-jena.de](mailto:sales@afs-jena.de)

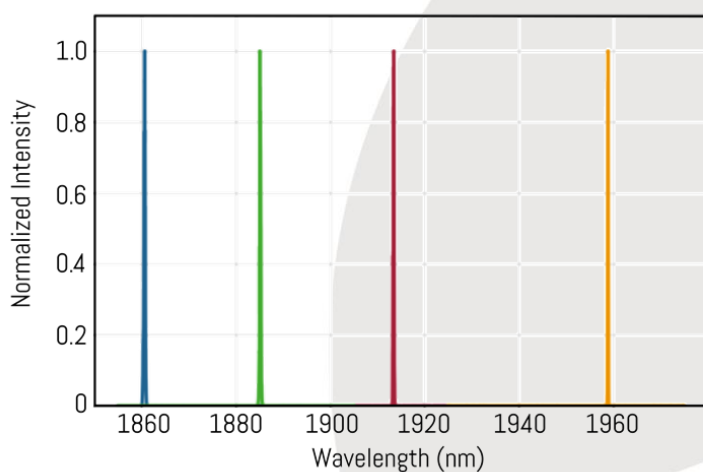




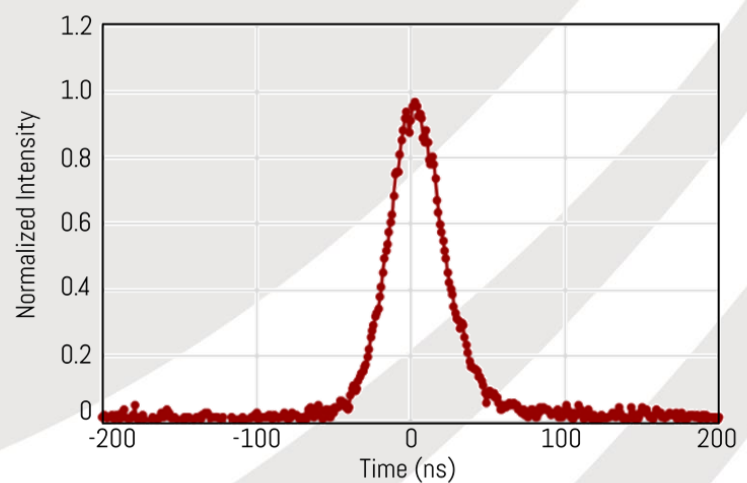
## CUSTOMIZED Q-SWITCH & QCW THULIUM LASERS

	Thulium-Q-switch	Thulium-QCW
Central wavelength	1860nm...2000nm	approx. 1940nm
Repetition rate	20kHz	cw ... 1kHz
Pulse energy	up to 500µJ	up to 50J
Peak power	up to 10kW	up to 500W
Average power	up to 10W	up to 100W
Pulse duration	<50ns	0.25ms ... 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	< 20µrad RMS (< 10% nat. divergence)	
Dimensions laser (W × D × H)	50cm × 40cm × 25cm, 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 configurations. We gladly customize a system that fits your specific needs.



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



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

