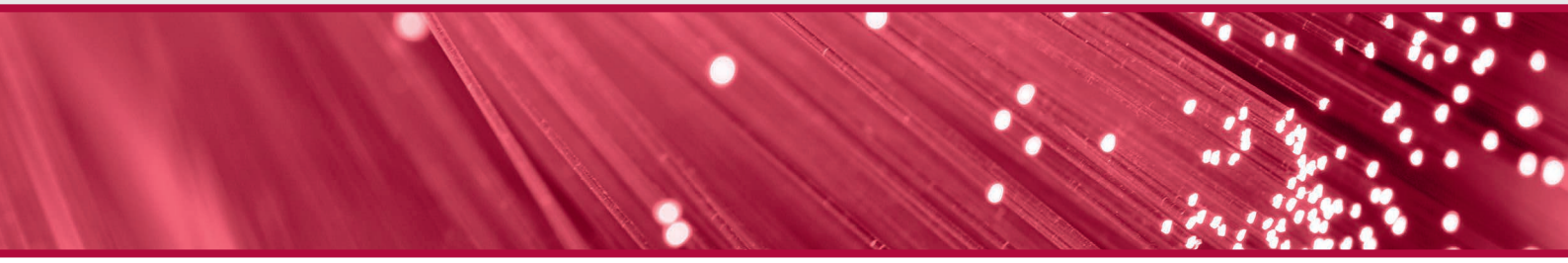
CUSTOMIZED kW- AND mJ-CLASS FEMTOSECOND LASER SYSTEMS

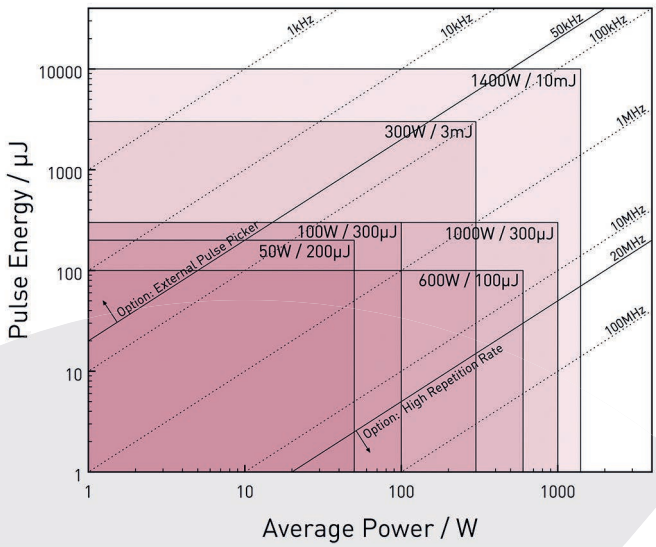
activefiber systems



Active Fiber Systems GmbH (AFS) is located in Jena, known as the "city of photonics" in Germany. As a spin-off from the Fraunhofer IOF Jena and the Institute of Applied Physics at the university of Jena AFS represents the expertise of innovative solid-state-laser development.

The mission of AFS is to transfer groundbreaking experimental results to reliable laser systems suitable for scientific and industrial applications. Among the extra-ordinary features of pulsed fiber lasers made by AFS are compact dimensions, considerably reduced production costs as well as fexible and outstanding laser parameters.

AFS customized kW- and mJ-class ultrafast laser systems are based on AFS leading-edge fiber technology. They unite multiple main-amplifier channels using coherent combination, a technology which AFS has matured to an industrial grade. Thus, the generated laser parameters are, for the first time, not limited by physical (optical) constraints of the laser architecture. Building on the exceptional performance of AFS fiber lasers, an extreme reliability, remarkable long-term stability, compact system design and high wall-plug efficiency can be guaranteed.



Overview of available laser parameters

kW-class high-repetition-rate fiber laser

AFS – Active Fiber Systems GmbH | Wildenbruchstraße 15 | 07745 Jena | Germany
www.afs-jena.de | Fon +49 3641 6338902 | Fax +49 3641 6338904 | contact@afs-jena.de

サンインスツルメント

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	HIGH REPETITION RATE	HIGH PULSE ENERGY
Central wavelength	1030 nm	
Repetition rate	50 kHz ... 100 MHz	10 kHz ... 20 MHz
Pulse energy	up to 300 µJ	up to 10 mJ
Peak power	up to 1 GW	up to 30 GW
Average power	up to 1 kW	up to 1.5 kW
Pulse duration	< 300 fs ... 10 ps adjustable	
Polarization	linear	
Beam quality	Close to diffraction-limited, M^2 < 1.3	
Average-power stability	< 0.5 % RMS	
Pulse-energy stability	< 0.5 % RMS	
Beam-pointing stability	<5 µrad RMS (< 5 % of nat. divergence)	
Additional features	Turnkey (no manual adjustment necessary), completely software-controlled, temperature-stabilized dust-sealed housings	
Options	OPA, SHG, THG, HHG, NC, BURST, FASTSWITCH	

AFS high-power few-cycle laser system

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