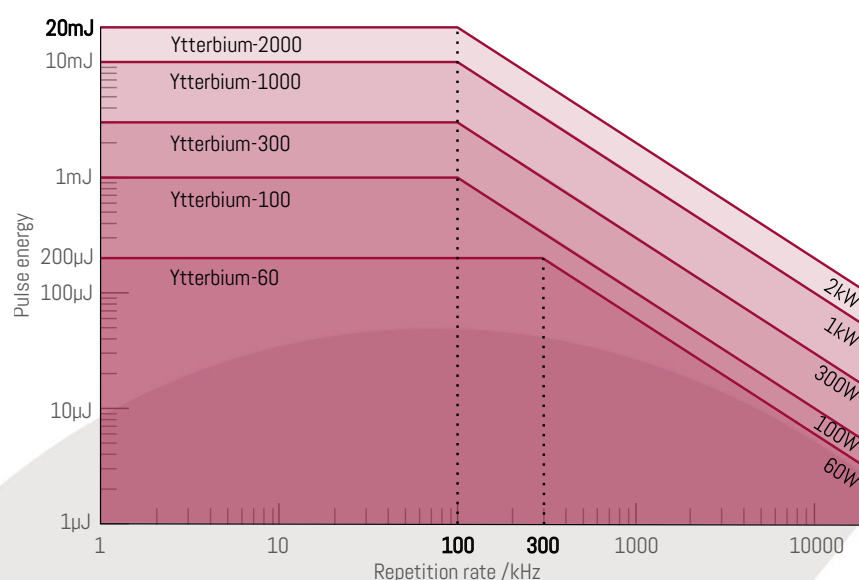




## Compact femtosecond lasers Ytterbium-60 & Ytterbium-100

The quality of any laser application crucially depends on the performance of the driving light source, i.e. the laser itself. In addition, most applications ask for more and more average power from the laser source to be cost-effective or sensitive enough.

AFS's ultrafast 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.



Overview of available laser parameters

### APPLICATIONS

- Driver for photo-emission-spectroscopy setups
- Pumping of optical parametric amplifiers (OPA)
- Generation of high harmonics (HHG)
- Materials processing

### MORE INFORMATION

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

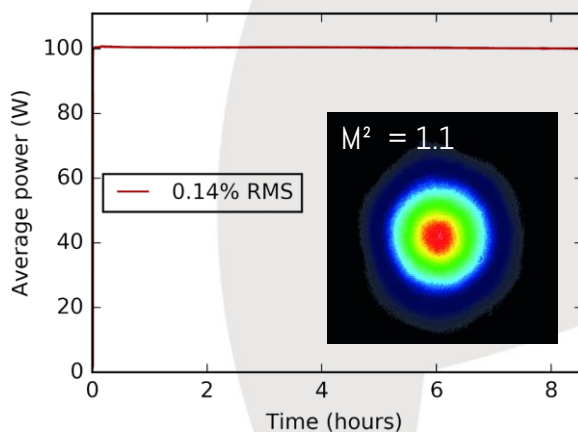




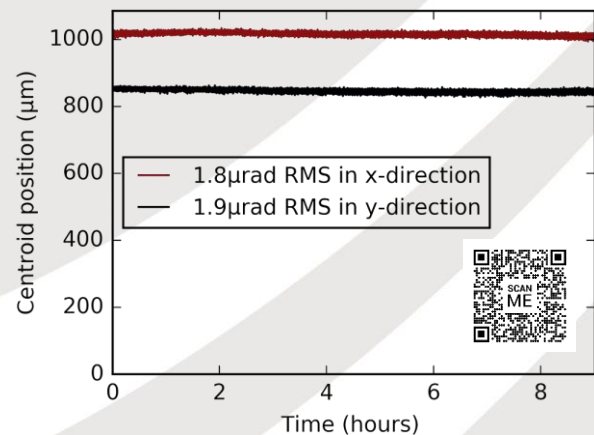
## Compact femtosecond lasers Ytterbium-60 & Ytterbium-100

	Ytterbium-60	Ytterbium-100
Central wavelength	approx. 1030 nm	
Repetition rate	50 kHz (or single shot via Ext. AOM upgrade) up to 20 MHz, others on request	
Pulse energy	up to 200 $\mu$ J	up to <b>1 mJ</b>
Peak power	up to 0.5 GW	up to 2.5 GW
Average power	up to 60 W	up to 100 W
Pulse duration	<b>&lt; 250 fs ... 5 ps adjustable, others on request</b>	
Polarization	linear	
Beam quality	close to diffraction-limited, <b><math>M^2 &lt; 1.2</math></b>	
RIN slow (Average power)	< 0.5% RMS [1/ (24 hours) ... 1 Hz ]	
RIN fast (Pulse energy)	< 0.5% RMS [1 Hz ... $f_{rep}/2$ ]	
Beam pointing	< 10 $\mu$ rad RMS (< 5% nat. divergence)	
Beam diameter	approx. 3 mm	
Dimensions laser (W x D x H)	112 cm x 41 cm x 25 cm	132 cm x 41 cm x 30 cm
Mass	approx. 80 kg	approx. 90kg
Add-ons	OPA, SHG, THG, HHG, Few-cycle generation, CEP-stability, GHz-Burst	
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 compact Yb platforms. We happily customize a system exactly to your needs.



Typical characterization of power stability and beam quality



Typical characterization of beam pointing @ 100 W average power