

## 2.8 μm ultrafast fiber laser

Femtum offers the first 3-μm class ultrafast fiber oscillator. This reliable, compact and maintenance-free laser is ideal for R&D applications in the mid-infrared.



### Technical Specifications

Optical <sup>1</sup>	Standard	Custom
Central wavelength	2800 (± 20) nm	
Bandwidth (FWHM)	10-30 nm	
Average power	35 mW	> 100 mW
Pulse energy	1 nJ	> 3 nJ
Repetition rate	~ 35 MHz	40 - 100 MHz
Peak power	> 1 kW	> 5 kW
Pulse duration	~ 500 fs	200- 500 fs
Beam diameter	< 3 mm	
M <sup>2</sup> (Average of X & Y)	< 1.3	
Output polarization	Linear	

### System specifications

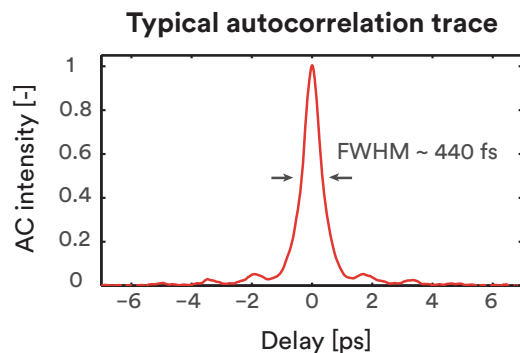
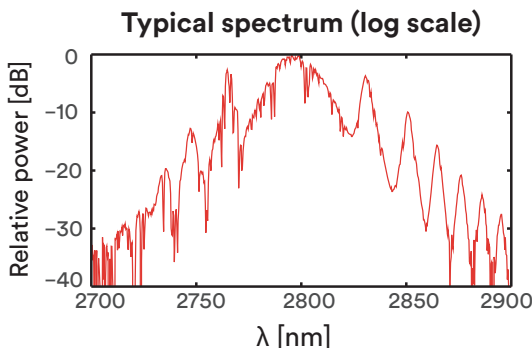
Dimensions(W x H x D) <sup>1</sup>	24 × 5.2 × 17.3 in.	
Cooling	Fan-cooled	
Voltage	100 to 240 V	
Beam delivery	Free space	Fiber output <sup>2</sup>
Controller	Computer-controlled or integrated touch screen	

### KEY FEATURES

- Compact and turn-key laser system
- Self-starting automated mode locking
- Pulse duration < 600 fs
- Average power up to 100 mW
- Single-mode output

### APPLICATIONS

- Mid-infrared frequency combs
- Nonlinear frequency conversion
- Supercontinuum generation
- High-field physics
- Nonlinear spectroscopy and microscopy



<sup>1</sup>Specifications subject to change  
<sup>2</sup>Single-mode delivery cable upon request

# UltraTune 3400

Femtum is proud to offer the first commercial ultrafast fiber laser in the mid-infrared. This compact, maintenance-free and tunable laser system is ideal for scientific applications, including spectroscopy and nonlinear optics.



## Technical Specifications

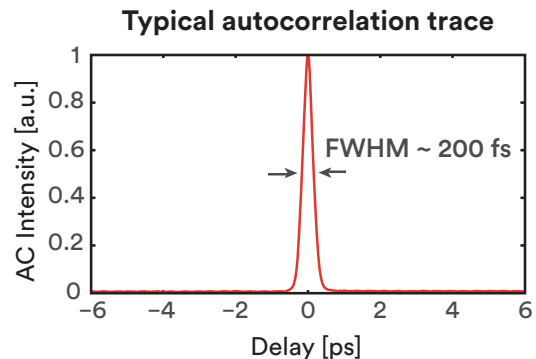
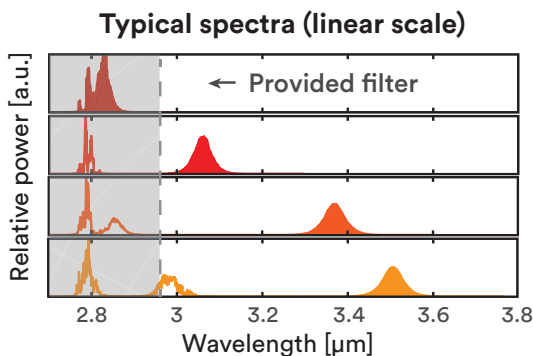
Optical <sup>1</sup>	Standard (3400-35) <sup>2</sup>
Central wavelength	3 - 3.4 $\mu$ m
Bandwidth (FWHM)	> 40 nm
Average power	> 100 mW (> 500 mW @ 3400 nm)
Pulse energy	> 3.5 nJ (> 17 nJ @ 3400 nm)
Repetition rate	~ 35 MHz (> 50 MHz optional)
Peak power	~ 1 - > 50 kW
Pulse duration	< 500 fs
Beam diameter	~ 3 or 9 mm
M <sup>2</sup> (Average of X & Y)	< 1.3
Output polarization	Random
System specifications <sup>1</sup>	
Dimensions (W x H x D) <sup>1</sup>	19 x 5.5 x 20.5 in. (rack-mount, 3U)
Cooling	Air-cooled
Voltage	100/240 V AC, 50/60 Hz
Beam delivery	Free space or fiber output
Controller	Computer-controlled (ethernet com.)

## KEY FEATURES

- Compact and turn-key laser system
- Automated mode locking
- Pulse duration < 500 fs
- High average power above 2800 nm
- Single-mode output

## APPLICATIONS

- Frequency combs
- Mid-infrared imaging
- Nonlinear frequency conversion
- Supercontinuum generation
- High-field physics



<sup>1</sup>Specifications subject to change  
<sup>2</sup>Custom specification upon request