

## 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

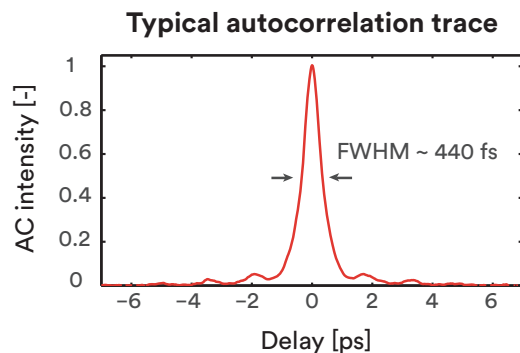
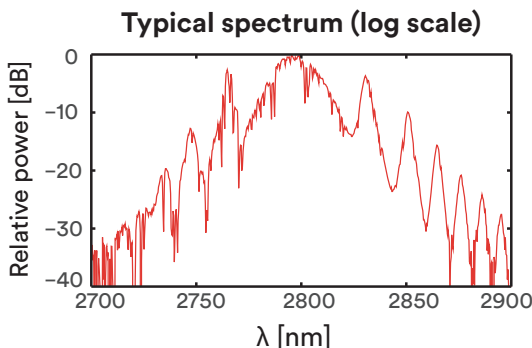
Dimensions(W x H x D) <sup>1</sup>	24 × 5.2 × 17.3 in.	
Cooling	Fan-cooled	
Voltage	100 to 240 V	
Beam delivery	Free space	Fiber output <sup>2</sup>
Controller	Computer-controlled or integrated touch screen	

### 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

# Tunable mid-IR ultrafast laser

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



## Technical Specifications

Optical <sup>1</sup>	Standard
Central wavelength	2.8 - 3.4 $\mu\text{m}$
Bandwidth (FWHM)	10 - 75 nm
Average power	30 - 1000 mW
Pulse energy	1 - 30 nJ
Repetition rate	~ 35 MHz
Peak power	~ 1 - 100 kW
Pulse duration	< 500 fs
Beam diameter	< 3 mm
M <sup>2</sup> (Average of X & Y)	< 1.3
Output polarization	Elliptical

### System specifications

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

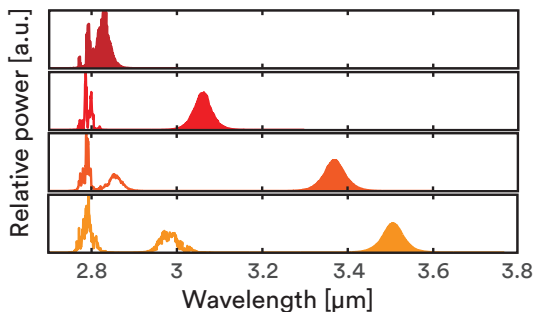
## KEY FEATURES

- Compact and turn-key laser system
- Automated mode locking
- Pulse duration < 500 fs
- Average power up to 1 W
- Single-mode output

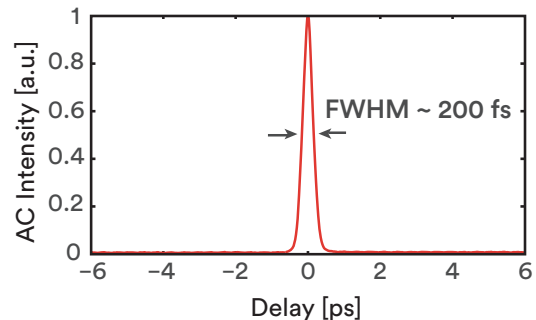
## APPLICATIONS

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

Typical spectra (linear scale)



Typical autocorrelation trace



<sup>1</sup>Specifications subject to change

Femtum Inc.

1-581-995-5157  
info@femtum.com  
femtum.com

1405 boul. Parc-Technologique, 2nd floor  
Québec (QC) G1P 4P5  
Canada

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PHOTO  
TECHNICA  
www.phototechnica.co.jp  
フォトテクニカ株式会社  
〒336-0017 埼玉県さいたま市南区南浦和 1-2-17  
TEL:048-871-0067 FAX:048-871-0068  
e-mail:voc@phototechnica.co.jp