

# High-Energy HE1060-fs & HE532-fs

Micro-joule femtosecond laser systems



## Key Features

- Ultra-short pulse widths <math><500\text{fs}</math>
- Up to - Single-shot to 1MHz variable repetition rate
- Ultra-low Heat-Affected Zone
- 1064nm or 532nm wavelengths
- Designed for 24/7 operation and OEM integration
- Maintenance-free and air-cooled

## Applications

- Ophthalmic surgery
- Tissue ablation
- Transparent material processing
- Thin-film processing
- Micro and nano structuring
- Semiconductor inspection and metrology



## Versatile high-energy fiber lasers

The **HE1060-fs** series is a range of high pulse energy ultrafast fiber lasers designed for industrial applications. Exceptional single-mode beam-quality, Megawatt peak-powers and class-leading stability enable the most demanding processes to be accomplished with this system.

The **HE532-fs** series adds fully integrated second harmonic generation to efficiently produce 532nm output at micro-joule pulse energy.

### Flexible

The integrated output modulator allows single-shot, burst-mode or continuous operation as well as pulse-to-pulse control of intensity,

### Reliable

The systems are based on an inherently robust self-starting ultrafast fiber laser oscillator and high energy fiber amplifier. They are air-cooled and require no user alignment or maintenance.

## Standard Specifications

Model	1064nm High-energy femtosecond Laser		532nm High-energy femtosecond Laser
	HE1060-1uJ-fs	HE1060-2uJ-fs	HE532-1uJ-fs
Central Wavelength	1064nm	1064nm	532nm
Maximum Pulse Energy	>1μJ	>2μJ	>1μJ
Pulse Width	<500fs		<500fs
Variable Repetition Rate (user-selectable)	Single-shot to 1MHz		Single-shot to 1MHz
Amplitude Noise	<±2%		<±2%
M-squared	<1.3		<1.3
Output Optic	Collimated		Collimated
Output Polarization	Linear		Linear
Cooling	Air-cooled		Air-cooled
Power Consumption (max)	<250W		<250W
Dimensions (WxLxH, mm)			
Laser Chassis	19" rack-mount		19" rack-mount
Remote Optical Head	220 x 360 x 130		220 x 360 x 130
Weight	<25kg		<25kg

## Custom Options:

- Wavelengths: **1030nm, 1045nm & 1053nm**
- Third Harmonic and Fourth Harmonic wavelengths
- Uncompressed picosecond pulses (HE Series)
- Electronically switchable wavelength
- Fixed or selectable repetition rates



**VISIBLE AND INVISIBLE  
LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION  
CLASS 4 LASER PRODUCT**

**CAUTION:** THIS IS A CLASS 4 LASER PRODUCT AND USE OF CONTROLS AND ADJUSTMENTS OTHER THAN THOSE SPECIFIED IN THE PRODUCT MANUAL MAY RESULT IN HAZARDOUS LASER RADIATION EXPOSURE

### Fianium UK Ltd.

20 Compass Point, Ensign Way, Southampton, SO31 4RA, UK  
 Tel: +44 2380 458776 Fax: +44 2380 458734 Email: [info@fianium.com](mailto:info@fianium.com)

### Fianium US Inc.

858 West Park Street, Eugene, OR 97401, USA  
 Tel: 1 541 343 6767 Fax: 1 541 343 1838 Email: [sales@fianium.com](mailto:sales@fianium.com)

### Fianium Asia Ltd.

21/F, New World Tower One, 18 Queen's Road Central, Hong Kong  
 Tel: +852 2607 4236 Fax: +852 3013 6883 Email: [asia@fianium.com](mailto:asia@fianium.com)