

Fianium High Energy

Microjoule pulse energy ultrafast fiber laser series

- Pulsewidths from 500 fs to 100 ps
- Up to 10 μ J pulse energy
- Single-shot to 1 MHz variable repetition rate
- 1064 nm or 532 nm wavelengths
- Compact and air cooled



Applications

- Ultrafast material processing
- Micromachining
- Thin film scribing, surface, and internal marking
- Semiconductor processing
- Micro and nano structuring
- Tissue ablation
- Ophthalmic surgery

The HE-series is a range of high pulse energy picosecond and femtosecond fiber lasers providing a cost effective all-fiber system which can be easily integrated into a material processing setup.

With a range of output options including single pulse, burst mode and energy ramping, the High Energy lasers provide an out-of-the-box, turnkey laser with a wide range of processing capabilities.

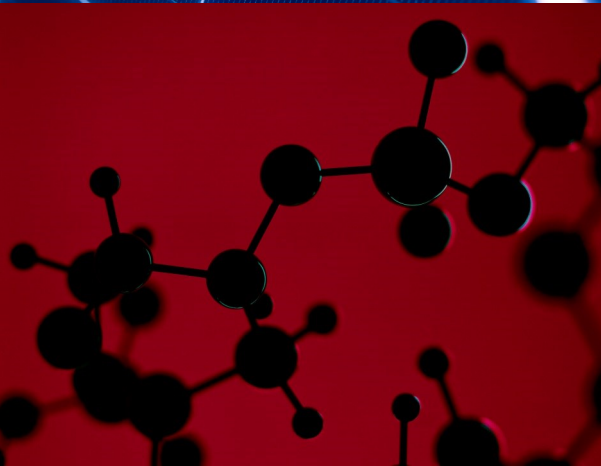
Exceptional single-mode beam quality, megawatt peak powers and class-leading stability enable the most demanding processes to be explored with these systems. The HE-532 series adds fully integrated second harmonic generation to efficiently produce green output with microjoule pulse energies.

Flexible

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

Ease of Use

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.



Models

Model	Central Wavelength	Maximum Pulse Energy	Pulse Width	Repetition Rate (user-selectable)	Maximum Average Power
HE-1060-10uJ-SP	1064 nm	> 10 μ J*	< 5 ps	Single-shot to 500 kHz	5 W
HE-1060-2uJ-fs	1064 nm	> 2 μ J	< 500 fs	Single-shot to 1 MHz	2 W
HE-532-5uJ-SP	532 nm	> 5 μ J	< 5 ps	Single-shot to 500 kHz	2.5 W
HE-532-1uJ-fs	532 nm	> μ J	< 500 fs	Single-shot to 1 MHz	1 W

*15 μ J/100 ps option available

Specifications

Optical

Power Stability	< 2 %
Beam Quality (M2)	< 1.3
Output Optic	Collimated
Output Polarization	Linear
Cooling	Air-cooled
Power Consumption	< 250 W

Dimensions (WxLxH, mm)

Laser Chassis	450 x 390 x 180 (19" rack-mount)
Remote Optical Head	220 x 360 x 130
Weight	< 25 kg

Other ultrafast products:

- FemtoPower: < 200 fs
- HYLASE: Up to 125 μ J
- aeroPULSE: Narrow linewidth

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All Fianium-branded products are produced under the UK quality management system certified in accordance with the ISO 9001:2008 standard.

