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Integrated Fiber Optics

FSP series laser

Femtosecond fiber laser for biophotonics

1045 nm, <90 fs, 15 MHz, 1.5 W

Integrated Fiber Optics offers compact telecom grade femtosecond lasers designed for multiphoton microscopy and other biophotonics applications. These models generate pulses with peak power unmatched in the market

Features

Temporally and spectrally clean pulses
High optical peak power
Turn-key operation

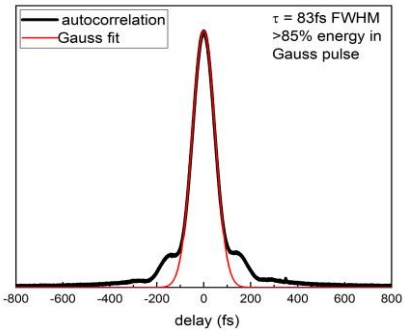
Applications

Multiphoton microscopy
Nonlinear and time-resolved spectroscopy
Photopolymerization
Pumping OPO/OPA

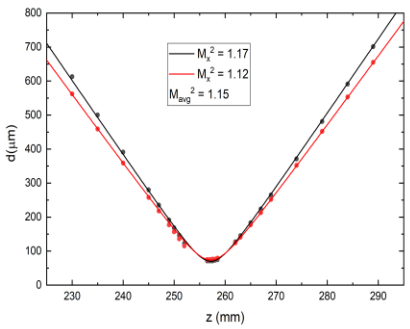
The generator within this femtosecond laser does not contain any critical components such as SESAM. The key advantage of this product is that it has zero consumable parts and is exceptionally robust to the environmental disturbances, like vibration and temperature changes. It can operate under normal, zero and anomalous dispersion conditions.

Integrated Fiber Optics

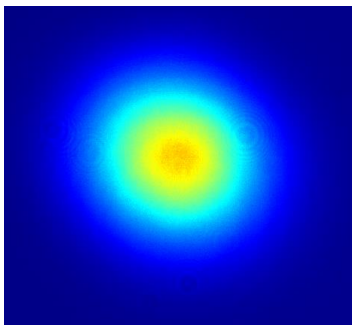
- High pulse peak power
- Air-cooled design
- Exceptional stability
- Maintenance-free

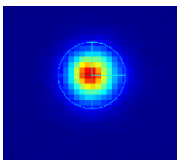


Autocorrelation trace at optimal compression



Z-scan measurement of the beam profile. Resulting M2 = 1.15. Beam circularity is >0.87





Left: beam profile from the laser at L = 10cm. Beam diameter d = 1.7mm, circularity 0.90. Right: beam profile at waist of 75mm lens. Beam diameter d = 68μm, circularity 0.98

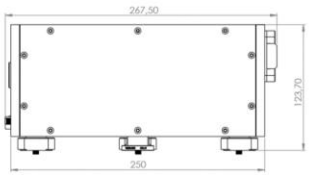
	Model
	FSP-2
Central wavelength	1045 nm
Pulse duration	<90 fs (70 fs typ.)
Dispersion compensation	±10'000 fs^2
Typical spectral bandwidth (FWHM)	35 nm
Pulse repetition rate	15 MHz
Average power	>1.5 W
Max pulse energy	>100 nJ
Peak power	1 MW
Beam quality	M^2 <1.2
Beam circularity	>0.9
Operating conditions	15-35 °C, humidity - not condensing

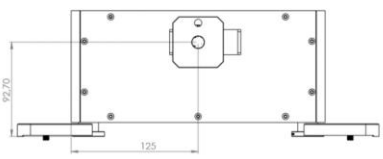
PATENT

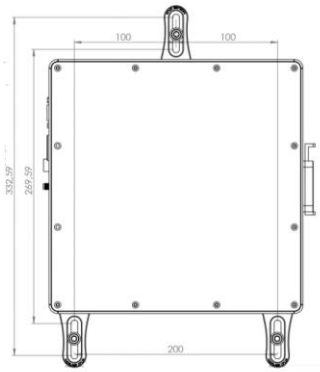
World patented technology

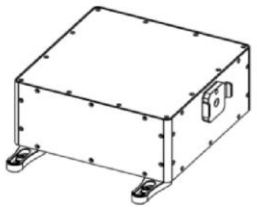
US10038297, JP6276471, EP3178137, CN106575849

*Integrated Fiber Optics hold an **exclusive license** of the IP invented by the Center for Physical Sciences and Technology*









Note: All dimensions are in millimeters.

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New Industrial Standard in Ultrafast Lasers