

Femtosecond Mode-Locked Fiber Laser

MLFL-100



Femtosecond stretched-pulse mode-locked fiber laser

Sub-100-femtosecond pulse width

Pulse repetition rate of 20 MHz

Designed for WDM applications as well as non-telecom uses

Auxiliary output port for easy monitoring of pulse train

The MLFL-100 Femtosecond Mode-Locked Fiber Laser* provides low-noise, ultrashort pulses with a high level of stability. Designed for WDM applications as well as non-telecom uses, the MLFL-100 is ideal for ultrafast spectroscopy, materials research, multiphoton microscopy and the pumping of parametric devices. What's more, it can be used as a seed source for chirped pulse amplification (CPA) experiments. The MLFL-100's passively mode-locked, stretched-pulse cavities can operate at low-amplitude noise and with low timing jitter.

* Not available in the USA

Generating and Amplifying Ultrashort Pulses

Stretched-pulse, mode-locked fiber lasers, with their broad gain bandwidth, represent a first-rate solution for generating and amplifying ultrashort optical pulses. Compact and highly stable, the MLFL-100 generates sub-100-femtosecond pulses. This affordable instrument delivers the performance required in a wide range of scientific and industrial applications.



Fiber-optic T&M,
monitoring, manufacturing
and assembly solutions

GAP
OPTIQUE*

EXFO

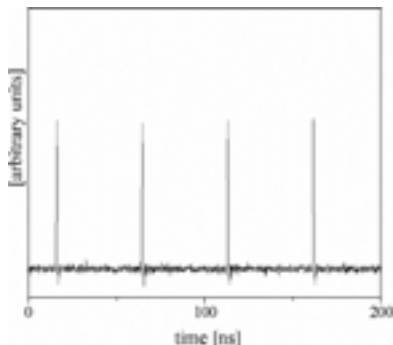


Figure 1. Typical pulse train under mode-locked operation.

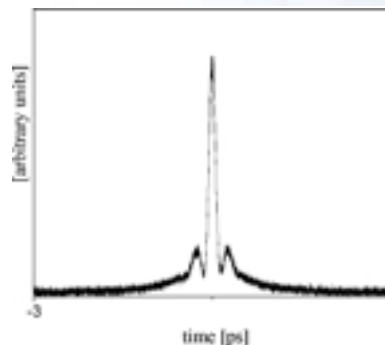


Figure 2. Typical auto-correlation trace under mode-locked operation.

Specifications¹

Mean output power	> 15 mW
Pulse width	< 100 fs
Repetition rate ²	20 MHz
Operating wavelength	1560 nm
Bandwidth	> 40 nm
Output polarization	User controllable
RMS noise	± 0.1 %
Timing jitter (Low frequency) ³	< 200 fs
Mode-locked stability ⁴	> 5 days (at 23 ± 2 °C or at 73 ± 4 °F)

Interfaces

Optical interface	Front panel FC/PC connector Front panel FC/APC auxiliary output port
Included accessory	Specific-length rigid APC patchcord
Hardware	Benchtop fiber laser

General Specifications

Line supply	175 VA at 115/230 VAC (50/60 Hz)
Operating temperature	23 ± 2 °C (73 ± 4 °F)
Storing temperature	-20 °C to +60 °C (-4 °F to 140 °F)
Warm-up time ⁵	15 minutes
Weight	20 kg (44 lb)
Dimensions (W x H x D)	49 cm x 13.3 cm x 32 cm (19 1/4 in x 5 1/4 in x 12 1/2 in)

Notes

1. Guaranteed specifications at the output of the included specific-length rigid patchcord.
2. Typical value. Repetition rate varies according to the length of the laser cavity.
3. Pulse-to-pulse variations over a millisecond timescale.
4. Typical value.
5. Minimum warm-up time for optimum performance.

Warning

The MLFL-100 laser corresponds to a Class 3A according to IEC-60825-1 (1993), Class IIIb according to CFR-1040 of the FDA and Class 3R according to IEC-60825-1 (2001) with respective limits of 50 mW, 6.8 W and 50 mW.



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