FML-15-PM-M

Femtosecond Mode-Locked Laser, Benchtop, PM Output

DEVICE

OVERVIEW

The Optilab FML-15-PM-M Module Femtosecond Mode-Locked Laser (FML) utilizes an unique saturable absorber for passive mode locking and delivers Femtosecond (FS) laser pulses with an excellent power stability and reliability. Designed with no moving parts, and requiring no construction, the FML-15-PM-M offers an user-friendly front panel, a control knob for adjusting the output power, and an electrical clock output for external trigger. The FML-15-PM-M is an all fiber ring with all PM fiber construction, and built with established telecom components make the laser highly stable while keeping cost low. The pulse width is factory selectable from 300 to 600 fs, with near transform-limited pulse shape and a better than 20 dB pedestal, and the pulse repetition rate can be specified from 20 to 40 MHz. With up to 30 mW output power, and an EDFA for amplifying the seed mode locked laser pulses, the FML-15-PM-M is the most cost-effective solution for applications requiring low to medium power. The all PM fiber version also features a 20 dB extinction ratio, contact Optilab for more information.

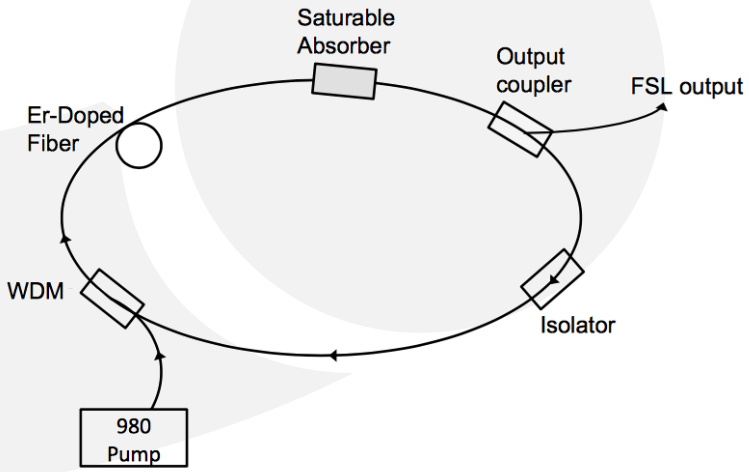
FEATURES

- All PM fiber construction, ER of 20 dB
- No moving parts, requires no adjustment
- Pulse width adjustable from 300 fs to 600 fs
- Integrated EDFA w/ +15 dBm output
- 1550 to 1560 nm peak wavelength
- Near transform-limited output
- Minimal pulse pedestal
- Adjustable power output to 30 mW
- 1 year warranty standard

USE IN

- Supercontinuum generation
- Telecom components characterization
- Precision frequency measurement
- Optical high speed sampling
- Terahertz radiation
- Optical switching
- Materials characterization
- Optical metrology

FUNCTIONAL DIAGRAM



FML-15-PM-M

SPECIFICATIONS

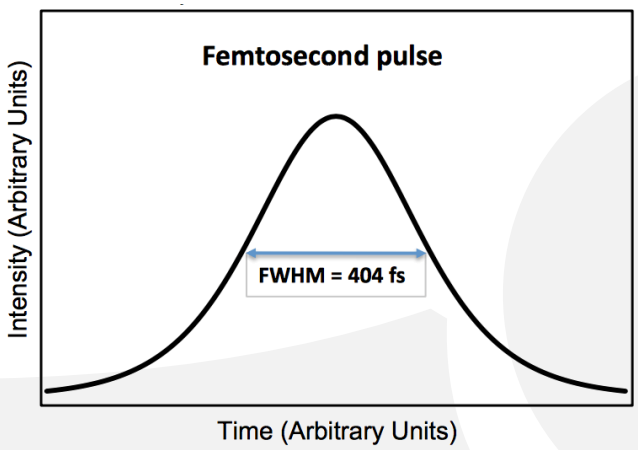
GENERAL

Output Power	Adjustable to 30 mW
Peak Wavelength	1550 nm – 1560 nm
Spectral Bandwidth	20 nm – 25 nm
Pulse Duration	300 fs to 600 fs
Pulse Repetition Rate	20 MHz – 40 MHz
Polarization Extinction Ratio	15 dB min, 20 dB typ.
Trigger Output	Pulse converted to electrical output

MECHANICAL

Operating Temperature	10 °C to +40 °C
Storage Temperature	-55 °C to +85 °C
Optical Connector	FC/APC, other optional
Local Alarm	LED: Optional Input Power
Remote Alarms	RS-232 Interface
Dimensions	155 mm x 317 mm x 33 mm
Accessories Included	110 V – 240 V AC Adaptor & Cable

PULSE SHAPE



TYPICAL OPTICAL SPECTRUM