

Rainbow 1550

1.5 μm Ultrafast Fiber Laser

For scientific research and industrial OEM



Rainbow 1550 series is ultrafast mode locked fiber laser with turn key system and maintenance free. It is designed as MOPA structure integrated optical and circuit structure, which is easy to integrate in researchers' device or industrial laser system. Because of its high stability, reliability, customization and cost-effective, it is an ideal light source for terahertz (THz) generation, optical / quantum communication and other popular applications.

The figure is the schematic diagram of Rainbow 1550's MOPA structure: high beam quality seed light source (Oscillator) is amplified by pump light through coupling them into fiber (EDF) in a certain way and using optical isolator to protect the oscillating cavity to realize the high power amplification of seed light source, and then compress the pulse width to <100 fs (@100 mW) through pigtail.

Rainbow 1550 has the following advantages in the principle of structural design:

- a. Based on the ring oscillator structure of SAM designed by mode-locking technique and optical isolator protection, the stability and reliability of this structure is ensured.*
- b. Due to all polarization maintaining fiber structure, the linear polarization output of laser is ensured.*

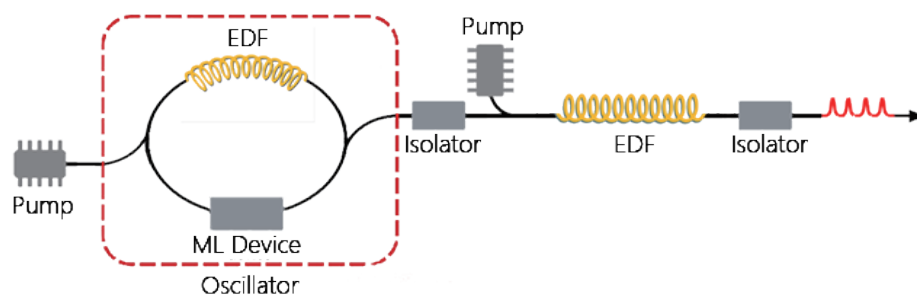
Key Features

- Customized operating wavelength
- High peak power
- Diffraction limited beam
- Tune-key system

Applications

- Terahertz generation
- Test and measurement
- Multi-photon imaging
- Seed for high-power lasers

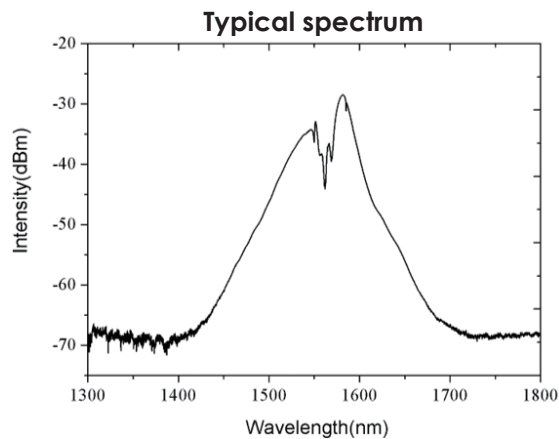
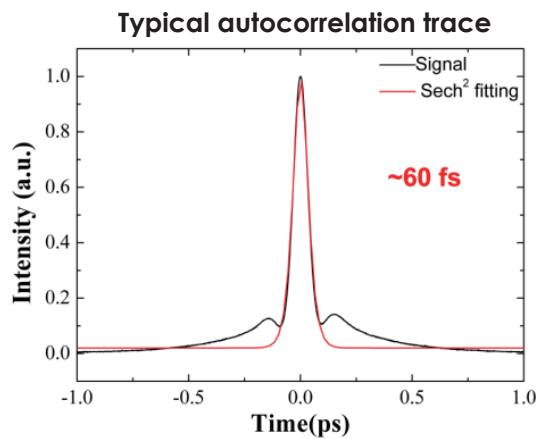
Schematic diagram of structural design :





Main Specification

Parameter	Performance
operating wavelength	1550 ± 20 nm (optional)
pulse duration	<100 fs (100 mW) , <1 ps (1 W)
Average Output Power	100 mW (standard) , 1 W (optional)
Repetition Rate	30-80 MHz
Peak Power	>25 kW
Operating Temperature	15-35 °C
Power Requirement	AC 100-240 V (50 Hz/60 Hz)
Dimensions	391 mm x 298 mm x 115 mm
Weight	7 kg
Output Fiber Type	Armored cable



Machine Drawing

