

# Rainbow 1550 Pro

## 1550 nm Ultrafast Fiber Laser

Rainbow 1550 Pro is an Er-fiber based high-performance ultrafast fiber laser specifically designed for scientific users and has flexible parameters upon user requests. The laser has an operating wavelength of  $1560\pm 10\text{nm}$ , pulse width of  $\leq 80\text{fs}$ , repetition rate of 80MHz and an average power up to 200mW.

Rainbow 1550 Pro is based on SESAM passive locking technology and has an all-PM fiber structure. It uses NPI Lasers' proprietary optical switch packaging technology, and integrates NPI Lasers' unique "Smart-Lock" processes to ensure long-term stability and reliability. The laser is an easy-to-use turn-key system, and can also be computer controlled. As a newest feature, the repetition rate of Rainbow 1550 Pro can be locked to an ultra-stable frequency reference to achieve a repetition rate deviation as small as  $< 10\text{mHz}$  (the "LOCK" option).

Rainbow 1550 Pro is well-suited for scientific uses such as THz-TDS (time-domain terahertz generation), SHG/THG imaging and multi-photon imaging. It can meet a broad range of R&D requirements of the scientific community.

### Applications :

- Terahertz generation
- Precision measurement
- Two-photon polymerization
- Two-photon imaging

## Main Specification

### Laser Parameters

Operating Wavelength	1560±10 nm	Average Power Stability	<0.5% RMS(12h@25°C)
Pulse width (FWHM)	<80 fs	Pulse Energy	>1.25 nJ
Repetition Rate	80 MHz	Polarization Extinction Ratio	>20 dB
Average Power	>1 W	Output Type	PM1550 Fiber,FC/APC Connector

### Electrical, Environmental and Mechanical Parameters

Supply Voltage	100-240 VAC	Weight	17 Kg
Operational Temperature Range	15-35 °C	Dimensions	390×297×115 mm
Operational Humidity Range	20~80 °C	Cooling	Air cooling

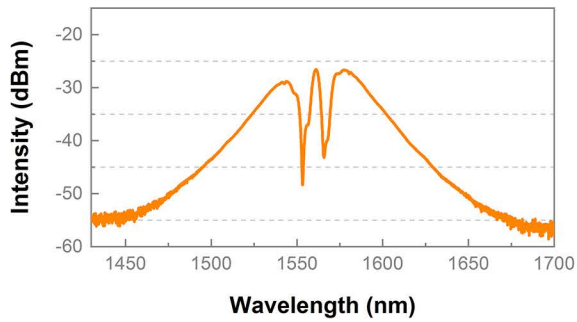


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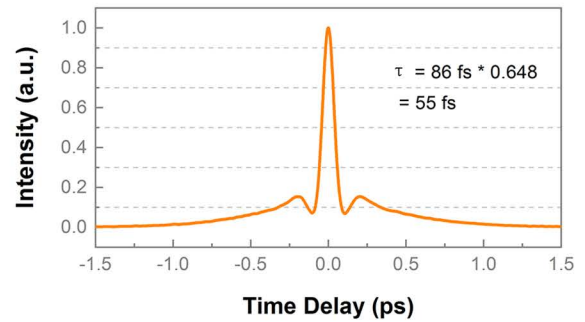
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### Test Data

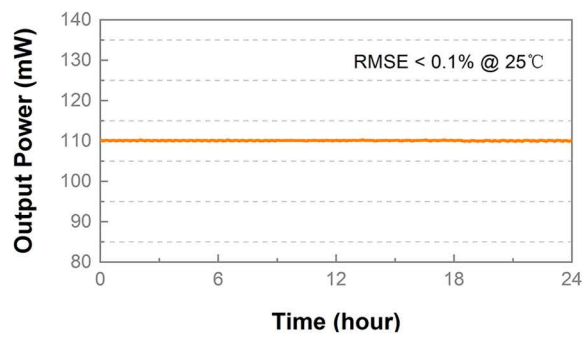
Output spectrum



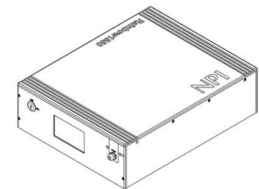
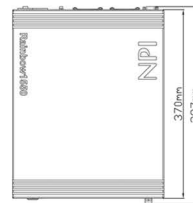
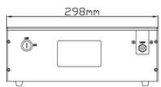
Output power



Power Stability



### Machine Drawing



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