

Rainbow 780 HP

780 nm High Power Ultrafast Fibre Laser

Rainbow 780 HP is a frequency-doubled version of our high-power Er mode-locked laser Rainbow 1550 HP. It can output <150 fs pulse, with an average output power of > 200 mW. The laser boasts a power stability within 0.5%, and is particularly suited for terahertz generation, two-photon polymerisation and quantum optics. The laser may be configured to have output ports for both fundamental and frequency-doubled light.

NPI is drawing upon our solid reliability track record in delivering hundreds of OEM ultrafast lasers annually to ensure Rainbow HP products are built to be reliable, fully-integrated, and turn-key systems for high-end applications, such as multi-photon microscopy, two-photon lithography, semiconductor inspection, and materials science research.

Applications:

- Two-photon / multi-photon microscopy
- Two-photon polymerisation
- Semiconductor inspection
- Terahertz wave generation
- Quantum optics and optical metrology
- Ultrafast and nonlinear optics

Main Specification

Laser Parameters

Central Wavelength	780±10 nm	Average Power Stability	<0.5% RMS (12hrs@25°C)
Pulse Width (FWHM)	<150 fs	Pulse Energy	>2.5 nJ (10 nJ optional)
Repetition Rate	80 MHz	Polarisation Extinction	>20 dB
Average Power	>200 mW	Ratio Output Type	Spatially collimated output

Electrical, Environmental and Mechanical Parameters

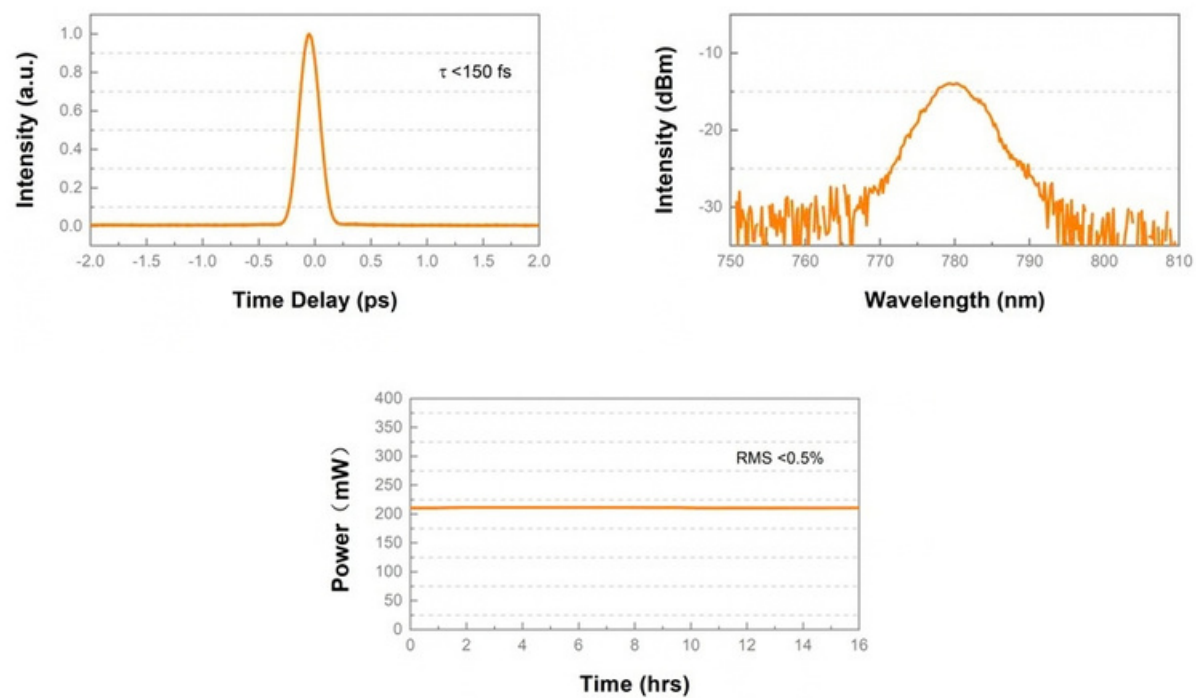
Supply Voltage	100-240 VAC	Dimensions	Laser Head: 448×226×135 mm;
Operational Temperature Range	15-35°C		Control Box: 538×365×156 mm
Operational Humidity Range	20~80% (non-condensing)	Cooling	Air cooling



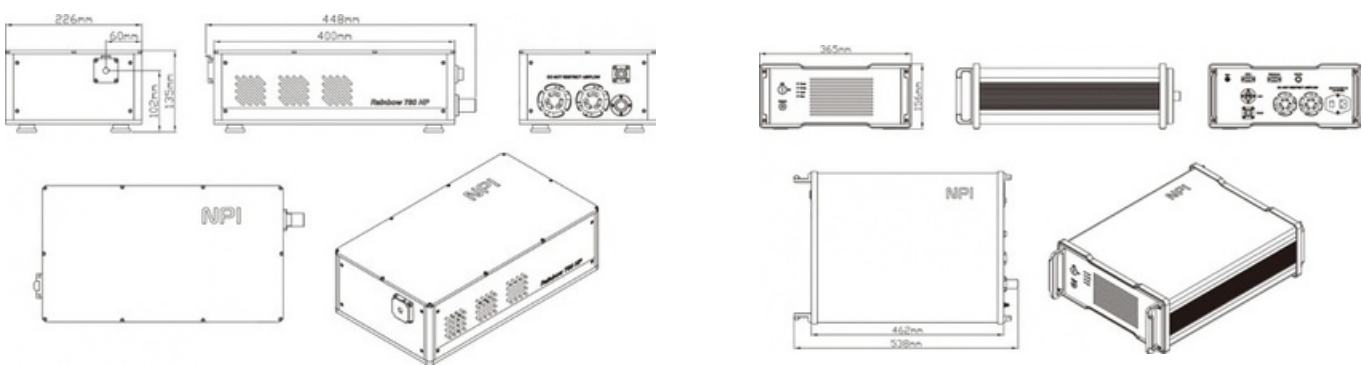
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Test Data



Machine Drawing



RoHS

CE

ISO

CAUTION
 CLASS 4 LASER RADIATION
 WHEN OPEN
 AVOID EYE OR SKIN EXPOSURE TO
 DIRECT OR SCATTERED RADIATION