

Rainbow 515 HP

515 nm High-Power Femtosecond Laser

Rainbow 515 HP is a high-performance femtosecond laser that is suitable for a range of industrial and scientific applications. It can output >1 W, < 200 fs pulses, with a factory-fixed repetition rate of 80 MHz. The laser features excellent beam quality, output power stability and long-term reliability. Rainbow 515 HP is equipped with industrial-grade ultrafast pump lasers, and advanced frequency-doubling technologies supported by sophisticated internal monitoring.

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	515±2 nm	Average Power Stability	<1% RMS (12hrs@25°C)
Pulse Width (FWHM)	<200 fs	Beam Quality	M2<1.2
Repetition Rate	80 MHz (30-80 MHz	Polarisation Extinction Ratio	>20 dB
Average Power	optional) >1W	Output Type	Spatially collimated output

Electrical, Environmental and Mechanical Parameters

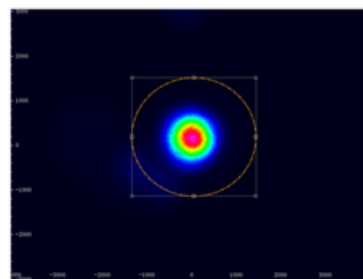
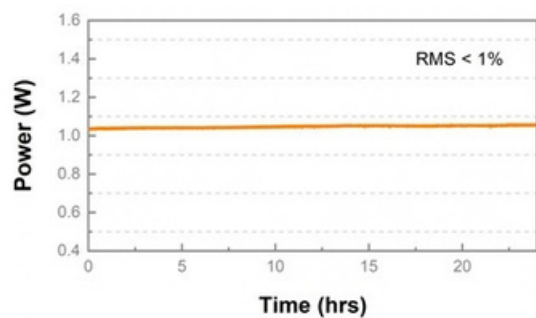
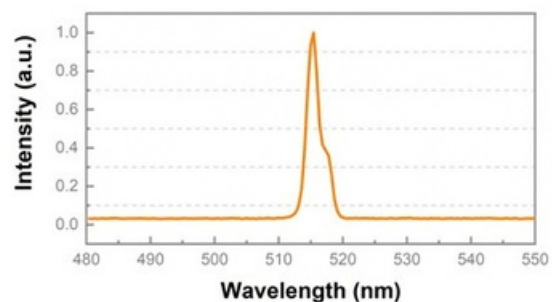
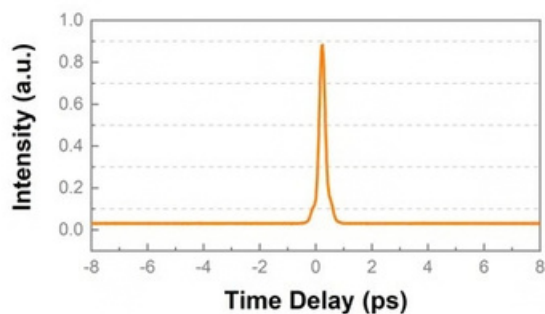
Supply Voltage	100-240 VAC	Dimensions	Laser Head:710×380×137.2 mm ;
Operational Temperature Range	15-35°C		Control Box:522×365×156 mm
Operational Humidity Range	20~80% (non-condensing)	Cooling	Air cooling



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Test Data



Machine Drawing

