

Rainbow 532 HP

532 nm High-Power Picosecond Laser

Rainbow 532 HP is a high-performance high-average-power picosecond laser that is suitable for a range of industrial and scientific applications. It can output <10 ps, 1-5 W average power (>8 W version can be customised) with a standard repetition rate of 50 MHz. The laser features excellent beam quality, output power stability and long-term reliability. Rainbow 532 HP is equipped with industrial-grade ultrafast pump lasers, and advanced frequency-doubling technologies supported by sophisticated internal monitoring. The standard specifications provide a pulse energy range of 20-100 nJ. To access even more energy, Blade 1030 Femto (with SHG option) can provide >1 uJ green femtosecond pulses at 250kHz repetition rate.

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

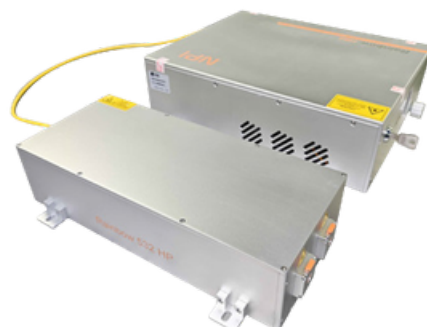
Main Specification

Laser Parameters

Central Wavelength	532±1 nm	Average Power Stability	<1% RMS (12hrs@25°C) M2<
Pulse Width (FWHM)	<10 ps	Beam Quality	1.2
Repetition Rate	50 MHz (20-80 MHz	Polarisation Extinction	>20 dB
Average Power	optional) >1W	Ratio Output Type	Spatially collimated output

Electrical, Environmental and Mechanical Parameters

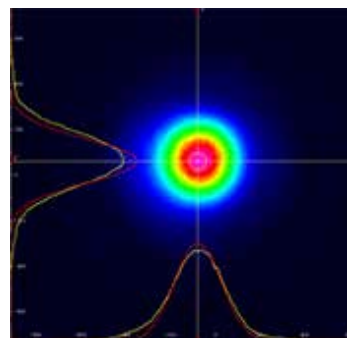
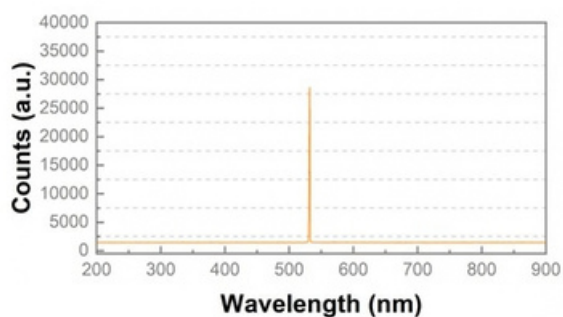
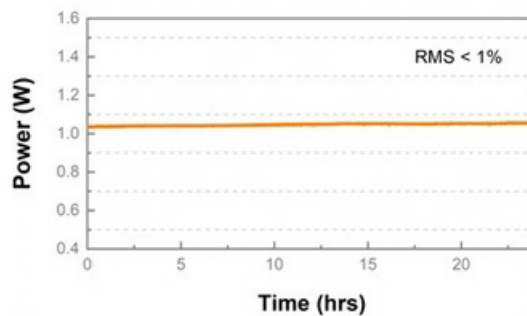
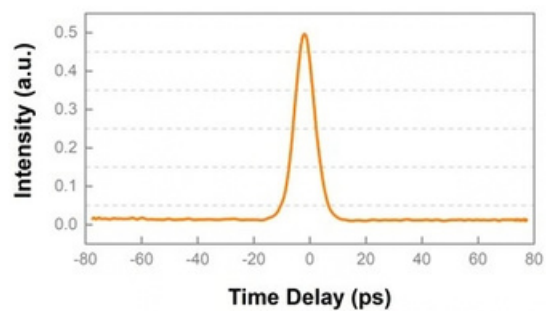
Supply Voltage	100-240 VAC	Dimensions	1064 fundamental frequency: 401×342×106mm;
Operational Temperature Range	15-35°C		532 frequency-doubled: 375×197×84mm
Operational Humidity Range	20~80% (non-condensing)	Cooling	Air cooling



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Test Data



Machine Drawing

