連續式固態雷射
Continuous Solid-State Laser

Laser Quantum torus

Torus系列 綠光雷射

Torus Single Frequency 532nm CW Laser

Typical Applications

- raman spectroscopy
- brillouin scattering
- holography

The torus 532 is a single longitudinal mode laser. Using digital electronics, the 532 nm beam is locked in frequency so that no mode-hops occur. Control of the laser can be accessed through a dedicated RS232 port on the PSU. The unique patented travelling-wave cavity results in an ultra-low noise output.

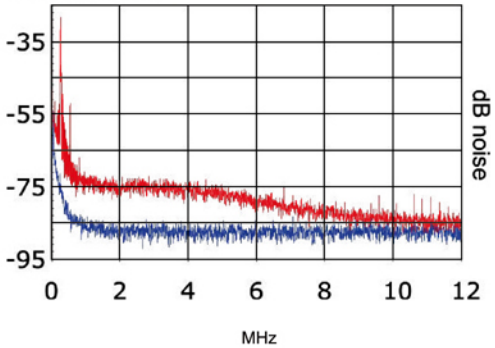
Specifications

power	50 - 400 mW
wavelength	532 nm
beam size	1.7 mm
spatial mode	TEM_{00}
bandwidth	1 MHz *1
divergence	0.4 mrad
M-squared	< 1.1
power stability	< 1.0 % rms *2
RMS noise	< 0.5 % rms
noise bandwidth	1 Hz to 100 MHz
pointing stability	< 5 urad *3
coherence length	> 100 m
polarisation ratio	100:1
polarisation direction	vertical
beam angle	1 mrad *4
operating temperature	15 - 35 deg C
head weight	1.3 kg
umbilical length	1.5 m
warm-up time	15 min

*1. instantaneous bandwidth
*2. test duration 8 hrs
*3. constant temp 25 deg C
*4. relative to head orientation

Features

single frequency, travelling wave
mode-hops eliminated
diffraction limited beam
compact design
zero stress,
permanently aligned cavity
hermetically sealed
Large LCD screen,
advanced features
extended warranty available
single phase mains driven
diode 18,000 hours MTBF
RS232 control



Comparing the dB noise spectra of the torus (blue) and a microchip SLM laser (red).

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