

## 532nm DPSS, 200mW Free-Space Turn-Key Laser Module



### Features

- User Adjustable Output Power up to 200mW
- Ultra-Narrow Linewidth: < 0.1 nm (FWHM)
- Single Transverse Mode Output
- High Power Stability: Better than  $\pm 2\%$  over 8 hours
- Ultra-Compact Module: 63.5 x 31.0 x 32.5mm with PowerBox Connected to the Laser Head

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## Product Overview

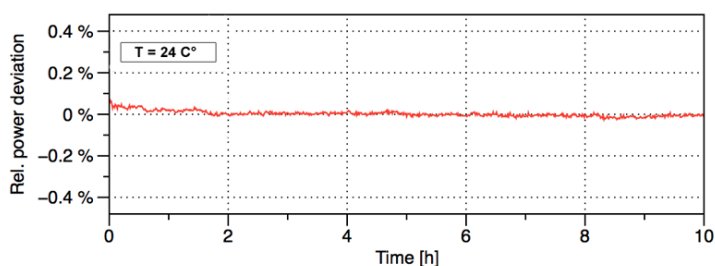
This high stability turn-key DPSS laser module is designed for demanding applications that require low noise performance and excellent optical output quality. This module offers user adjustable output power, a USB interface, and control software. This module is configured for free-space output up to 200mW; an optional fiber-coupled module offers output power up to 70mW.

These diode laser modules include an embedded TE cooler which regulates the temperature for high output stability. The active temperature control loop ensures very high short and long term stability.

The module connects to your PC through a USB interface and includes the GUI based control software. The user interface makes set-up quick and easy: all operating parameters can be set, monitored, and controlled from your PC using the Ltune laser control software for Windows. Alternatively, the laser can easily be controlled from your own application software. The operating manual contains information about writing your own software to control the module.

This DPSS laser is available with multiple options to optimize the system for your application. Accessories include a mechanical shutter, collimating optics, and fiber-couple adapter.

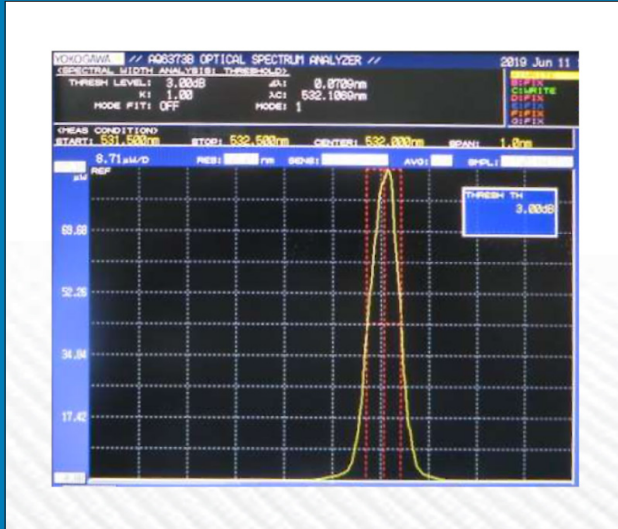
Typical Laser Power Stability (10 hours)



**Precision temperature control** through embedded TEC thermo-electric controller and **low noise current source** electronics provides very high power stability.

## HIGH STABILITY OUTPUT

The LD series modules are designed to deliver industry leading power stability over both short and long time intervals. The low noise current source, active temperature control and careful attention to electro-optical design provides a high stability output for the most demanding applications.



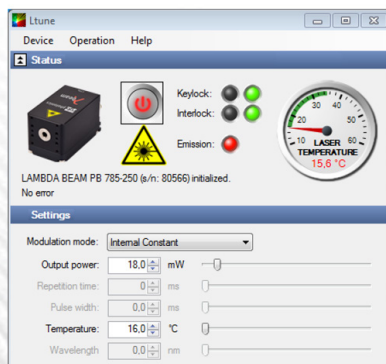
## ULTRA NARROW LINEWIDTH

The DPSS Laser module is renowned for the ultra-narrow linewidth of <math><0.1\text{ nm}</math>.

The laser module operates in constant nominal power mode, switchable up to 1kHz. Faster modulation rates are easily achieved with an external acousto-optical modulator.

## Control Output Power and Temperature through Ltune Software and GUI (Included)

- User adjustable laser output power
- Temperature display and temperature adjustment
- Laser status, configuration and operating time



## SIMPLE SET-UP AND CONTROL

Operating parameters can be monitored and controlled from a PC using the Ltune laser control software for Windows.

Alternately, the laser can be controlled from your own application software.

## LD-532NM-200MW Specifications

### LASER OUTPUT SPECIFICATIONS

- Wavelength: 532 nm,  $\pm 1$  nm
- Output Power: 200 mW (user adjustable 0 ~ 200mW)
- FWHM Linewidth: < 0.1 nm
- Linear Polarization: > 10:1
- Beam Alignment: < 5 mrad and < 0.1 mm (compared to base mount)
- Pointing Stability: < 5  $\mu$ rad/K
- Noise: < 0.3 % RMS
- Power Stability: < 3 % (8 hours)
- Beam Divergence: < 1.2 mrad
- Beam Diameter: Round Beam, 1.2 mm
- Warm-up Time: 5 seconds

### OPTIONS

- Fiber Coupled Output (Request Pricing): Model DP-532NM-70MW-FC
- Fiber Coupled Output Max Power: 70 mW Ex-Fiber
- Opto-Mechanical Shutter
- Beam Diameter Correction
- Polarization > 10,000 : 1

### GENERAL SPECIFICATIONS

- Dimensions: 63.5  $\times$  31.0  $\times$  32.5 mm (laser head)
- Dimensions: 98.6  $\times$  31.0  $\times$  32.5 mm (w/ PowerBox Power Supply)
- Weight 94 g (laser head)
- Weight 163 g (w/PowerBox)
- Operating Temperature: 0  $^{\circ}$ C to 45  $^{\circ}$ C (non-condensing)
- Storage Temperature: -25  $^{\circ}$ C to 70  $^{\circ}$ C
- CDRH Classification 3b



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**PRODUCT SALES AND SERVICE:**

Orders for this product are fulfilled by Laser Lab Source in North America and select international regions.

**PRODUCT WARRANTY:**

This product is sold with a full one year warranty. It is warranted to be free from defects in material and/or workmanship for a period of one year from the date of shipment.



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