

Brookhaven

Introduces

the Mini-L30

Laser



Features at a Glance

- 30 mW, 637 nm
- Compact Diode Laser
- TEM₀₀₁, Stabilized, Calibrated
- For use in SLS/DLS

Introduction

The **Mini-L30** is a small, stand-alone, red laser diode assembly with superb temperature and power stabilization. It can be used with Brookhaven's **BI-200SM** goniometer for dynamic and static scattering. With nominal 35 mW, power at a wavelength of 637.6 nm, it is an ideal replacement for the traditional 35 mW, HeNe laser (632.8 nm) when space is at a premium.

The key to the performance of the **Mini-L30** lies in the unique combination of temperature stabilization with precision power control. The temperature is stabilized at 16.5 +/- 0.01 °C. The result is a polarization ratio greater than 150:1 at 637.6 nm. Internal power monitoring results in outputs stabilized to +/- 0.5 % or better. Mode hopping is suppressed because of the power and temperature stability.

Compact Size

Attach the power brick to the side of the **Mini-L30**'s controller and the controller to the laser head. Key actuated with mechanical shutter, the **Mini-L30** is a Class IIIb/3B laser. It can be used with other light scattering setups as well as Brookhaven products. With a laser housing that measures only 9.4 cm x 7.0 cm 11.2 cm, it is about the size of a coffee mug.

Savings Due to Size

A 35 mW, HeNe laser is over a meter in length; whereas the **Mini-L30** is 11 cm in length. The small size of the **Mini-L30** means a smaller less expensive optical table or breadboard can be used. The stabilized output of the laser can be varied by a factor of 10. It is also *calibrated* and that means you can set the output power in milliwatts. thus, compared to a fixed-power HeNe laser, a variable neutral density filter wheel is no longer required.



Specifications

Laser Power: 30 mW output, nominal

Wavelength: 637 nm, nominal

Polarization: > 150:1

Beam Shape: elliptical, 2 mm x 3 mm, collimated

Includes: laser head, controller, universal power brick (not shown)

Size: laser head 9.4 cm x 7.2 cm x 11.0 cm

controller 4.9 cm x 14.5 cm x 9.5 cm

power brick 3.0 cm x 12.3 cm x 5.7 cm

Power Requirement: 100-240 VAC, 50/60 Hz, 20 Watts

Safety: This laser product complies with DHHS/CDRH radiation performance standards 21 CFR sub-chapter J and IEC 825-1:1993)

Class: Class IIIb (CDRH), Class 3B (IEC 825-1:1993)

Weight in kg: head (0.59), controller (0.44), brick (0.29)

Environmental Characteristics:

Temperature 10-75°C

Humidity 0-95 %, non-condensing

A policy of continual improvement may lead to specification changes

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