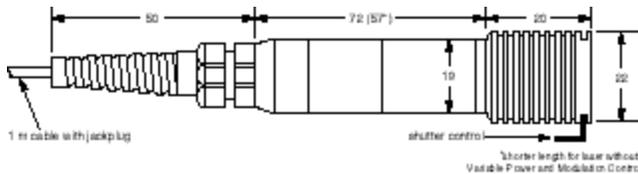

Circular Beam Diode Laser

635 nm Circular Beam Diode Lasers

- **High brightness 4, 7, and 10 mW stabilized output powers @ 635 nm**
- **Circular beams with diffraction limited "He-Ne" beam quality ($M^2 \sim 1.1$)**
- **500 kHz modulation bandwidth and variable power control**

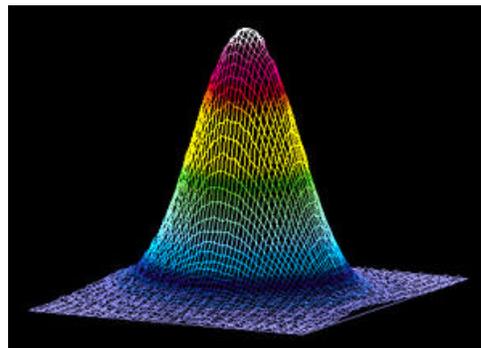
Circular beam Diode LabLasers™ deliver high brightness diffraction limited circular beams with 4, 7, or 10 mW of power. These "He-Ne equivalent" lasers have a wavefront quality of $1/10$ and a beam quality factor, M^2 of 1.1 or better. The output beams are linearly polarized ($>100:1$) and the beam pointing stability is ~ 0.05 mrad/hour. Rugged packaging encloses index guided single mode diodes, with emission wavelengths of 635 ± 5 nm (increasing ~ 0.2 to 0.3 nm/°C) and high quality optics featuring beam circularization optical technology.



These lasers have a sophisticated internal driver/controller circuit, which also provides surge, and reverse polarity protection. The driver/controller circuit has an input connection, which can be used to vary the power up to the specified maximum, or modulate the power at up to 500 kHz. For reliable long life operation the LabLasers should be operated with a 6 VDC supply. The Diode LabLaser Universal Power Supply is strongly recommended. This supply features a variable power control and all the necessary regulatory and safety features, such as keylock, emission delay and remote interlock. The power supply has a jack socket that matches the jack plug on the end of the 1m cable supplied with every LabLaser. The same power supply should be used even when the laser is ordered without the Variable Power and Modulation Control feature.

It is recommended that these lasers should be mounted in a heatsink. The temperature change induced wavelength increase will be <1 nm over the first hour of operation.

Typical Beam Profile



List of Laser Diodes available

Wavelength (nm)	Power (mW)	Beam Divergence (mrad)	Variable Power and Modulation Control
635	4	0.80	Yes
635	4	0.80	No
635	7	0.75	Yes
635	7	0.75	No
635	10	0.75	Yes
635	10	0.75	No

LabLasers is trademark of Coherent Optics.

Diode LabLaser Universal Power Supply

- **Fully-featured LabLaser 6 VDC power supply**
- **Variable laser power control**
- **Keylock, emission delay, and remote interlock**

The Diode LabLaser™ Universal Power Supply provides a well regulated 6 VDC, 250 mA output for driving any of the Diode LabLasers with the additional benefit of variable power control. To vary the output power of the Diode LabLasers, which incorporate the Variable Power and Modulation Control circuitry simply adjust the multi-turn knob on the front panel of the power supply. This varies a voltage on the “third wire” connection in the laser cables and the laser power can be smoothly varied between threshold and the rated power.

The supply incorporates CDRH safety features (keylock, power-on indicator, 4-6 second emission time delay and remote interlock socket).



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