

The 635 nm Diode Laser Module employs solid-state laser technology in a compact, economical package. This low-cost visible diode laser (VDL) module is an alternative to the 632.8 nm air-cooled HeNe laser.

HIGH INTENSITY BEAM

Cytomation's Visible Diode Laser has a high intensity beam that provides superior performance, as shown in Figure 1. The six populations differ by 4 orders of magnitude, yet all six of the populations present in the Molecular Probes Linear Flow Deep Red® beads are clearly visible on the graph.

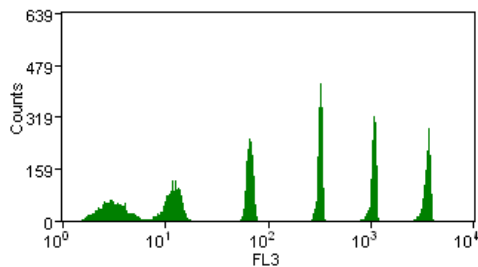


FIGURE 1. 635 nm Diode Laser Module illumination of Molecular Probes Linear Flow Deep Red beads [L-14836.]

NATURALLY ELLIPTICAL BEAM

The 635 nm VDL module produces a naturally elliptical beam. This natural elliptical energy distribution offers greater peak intensity than that provided by the 35 mW HeNe laser using traditional spherical optics. The narrow dimension of the beam is along the direction of the sheath

flow. This has two benefits. First, it broadens the laser focus laterally, reducing the variation in cell-to-cell illumination. Second, it overcomes spatial cross-talk at the illumination pinhole strip.

LOW COST ALTERNATIVE

The 635 nm VDL module provides a low-cost alternative to the 632.8 nm HeNe laser, which is often purchased with two and three-laser MoFlo instruments. This lower cost is seen in the purchase cost and the dollar/milliwatt cost.

MINIMAL SPACE REQUIREMENTS

The 635 nm VDL Module requires no additional space on the MoFlo bench; it mounts to an X-Y-Z positioning stage that is mounted to the Illumination Table. This feature is significant when configuring and upgrading benchtop analyzers (BTA) and benchtop sorters (BTS), which can now hold two lasers on the smallest footprint. A two-laser MoFlo cytometer can also be easily upgraded to three lasers.

635 NM DIODE LASER TECHNICAL SPECIFICATIONS

635 nm Visible Diode Laser Module includes:	635 nm Diode Laser with mounting bracket attached Electronic laser shutter control X-Y-Z stage Supply cables
Wavelength:	635 nm
Power Input:	5 V
Power Output:	12.5 mW
Beam Diameter:	1.2 x 6.2 μm
Focused Spot Size:	8 x 35 μm
Laser Dimensions:	65 mm (length) x 18 mm (diameter)
Laser Weight:	70 g

Cytomation, Inc. is a privately held bio-technical instrumentation corporation specializing in high-performance, high-speed flow cytometer analyzers, sorters and upgrades. Our mission is to design, produce, and service the finest flow cytometers and cell sorters in the world — unparalleled in performance, accuracy, versatility, reliability and speed. MoFlo, our premier flow cytometer, is a modular system that is easily upgraded whenever requirements change or new modules become available.

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