

# UL Series Red Laser Diode Module

Part No: *UL5-0.4G-650*



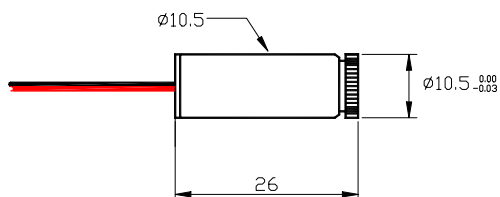
## Product Features

- High Stability and low noise
- Collimated or Adjustable focus beam
- Reverse Polarity Protection
- Custom Options Available

## Application

- Measurement
- Bioanalytical
- Automation
- Alignment

## Mechanical Drawing



### Operational Hazard-Semiconductor Laser Diode Module:

This laser module emits radiation that is visible and harmful to human eye. When in use, do not look directly into the laser emitting aperture. Direct viewing of laser diode emission at close range may cause eye damage.

**Limited Warranty:** One year. No warranty coverage for disassembly, modifications or damage due to abuse or misapplication.

## Specification

### OPTICAL

Wavelength	650 nm
Optical Output Power	<0.4 mW
Stability	<1%
Wavelength Drift	0.2nm/°C
Noise (20MHz Bandwidth)	<0.5% RMS
Laser Class	Class I (IEC-European)
Laser Operation	Continuous
Laser Structure	Single Mode Laser
Divergence at the collimation	<0.5 milliradian
Spot Size	Adjustable Or Collimated(5mm)
Minimum Spot Size	<60µm at <10" distance
Bore sight Accuracy	<2.5mm/m
Pointing Stability	<50µrad

### ELECTRICAL

Operating Voltage <sup>1</sup>	3 to 5 VDC
Operating Current	<60 mA
Control Circuit	Auto Power Control
Electrical Connections	+Red, -Black

### MECHANICAL

Dimension	10.5mm(D)x 26mm (L)
Cable	380mm
Operating Temperature	-10°C to +50°C
Storage Temperature	-40°C to +80°C
Heat Sink Requirements <sup>2</sup>	Not Required

### Notes

1. Higher operating voltage version (9 to12V) is available, the part No. will be: UL12-3.5G-650; the size will be 10.5mm(D)x32mm (L), additional heat sink is recommended for extended use.
2. Heat Sink: The UL Series Laser Diode Module is designed to operate without heat sink. Do not restrict air circulation around the device; an additional heat sink can be used to maximize the performance and life time of the laser.

**Caution:** The case is internally connected to the circuit; damaging to the anodized surface may result in failure of the laser module.