

# UT Series Modulated Red Laser Module

Part No: UT5-3.5G-650



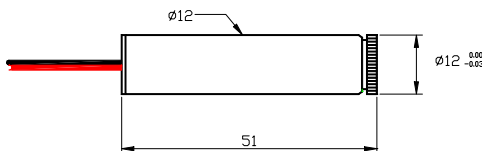
## Product Features

- TTL Modulation from CW up to 155 MHz
- Collimated or Adjustable focus beam
- 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	3.5 mW
Stability	<1%
Wavelength Drift	0.2 nm/°C
Noise (20MHz Bandwidth)	<0.5% RMS
Laser Class	Class IIIa
Laser Operation <sup>1</sup>	Continuous
Laser Structure	Single Mode Laser
Divergence at the collimation	<0.5 milliradian
Spot Size	Adjustable or collimated(5mm)
Minimum Spot Size	<60 µm at <10" distance
Bore sight Accuracy	<2.5 mm/m
Pointing Stability	<50 µrad

### ELECTRICAL

Operating Voltage	3.5 to 5 VDC
Operating Current	< 60 mA
Modulation	0 Hz to 155 MHz
TTL Input	Low (0~0.8 V), High (3~5 V)
Electrical Connections	+(Red), -(Black), TTL(White)

### MECHANICAL

Dimension	12 mm(D)x 51mm (L)
Cable	200 mm
Operating Temperature	-10°C to +50°C
Storage Temperature	-40°C to +80°C
Heat Sink Requirements <sup>2</sup>	Recommended for extended use

### Notes

1. For CW Operation: Connect the white wire to the red wire.
2. Heat Sink: The UT Series Modulated Red Laser 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; damage to the anodized surface may result in failure of the laser module.



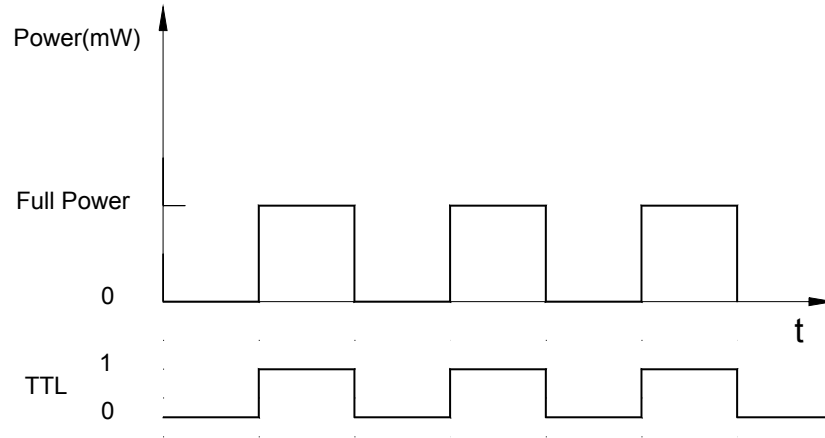
Complies with CDRH 21CFR 1040.10

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## TTL Modulation

The UT series red laser module is TTL modulatable between 0 and the full power by applying an external TTL input signal (e.g. from function generator) using third white wire. When the TTL input is Low the laser power is completely off. When the TTL input is high the laser output is at Full Power. The TTL signal can be any on-off time combination.



## Continuously Operation

The UT series laser module can be operated continuously by applying a high signal to the TTL input which can be done by connecting the white wire and red wire together.

