

Temperature Stabilized Semiconductor Laser Module

Key Features:

- ◆ Fiber Coupled or Free Space
- ◆ Circularized Laser Beam
- ◆ Constant Optical Power
- ◆ TTL Modulation Option
- ◆ Low Optical Noise
- ◆ ESD Protection
- ◆ Plug & Play



Applications:

- ◆ Bio Technology
- ◆ Photo Finishing
- ◆ Semiconductor Instrument
- ◆ Medical Instrument
- ◆ Scientific Research



The FreeBeam™405 Violet Blue Laser Module is a highly integrated free space violet laser module with laser optics and electronics into a single package. It features very low optical noise and up to 100 KHz TTL modulation. Laser output power can be remotely controlled through electrical cable connected to the back panel of the package.

The FreeBeam™405 Violet Blue Laser Module came with two different packages for you to choose from. Tub style part number start with FBT, box style start with FBB. FBB can allow you to remotely control Laser output power through electrical cable connect to the back panel of the package, while FBT can allow you to control optical power locally through a potential meter on the back panel of the laser tube.

The FreeBeam™405Violet Blue Laser Module is available for single mode and multi mode fiber coupled configuration.

The FreeBeam™405 Violet Blue Laser Module is a Class III b laser product.

Specifications:

| | |
|--------------------------------|--|
| Part Number | FBx - 405 – xxx |
| Wavelength | 400nm to 410nm |
| Output Power with TEM00 | 10mW, 20mW, 30mW, 45mW, 60mW, 80mW, 100mW |
| Output Power | 370mW(multi transverse mode) |
| Noise(RMS) | <0.3% |
| Longitudinal Mode | Multi Mode or Single Mode Optional |
| Power stability | 8hrs, <2% |
| Beam pointing stability | <10urad/°C |
| Polarization | 100 : 1 |
| Beam diameter | 2.6 X 1.3mm(Elliptical Beam) |
| Beam diameter | 2.4mm(Circularized Beam) |
| Beam divergence | 0.3 X 0.6 mrad(Elliptical Beam) |
| Beam divergence | 0.3 X 0.6 mrad(Circularized Beam) |

This component does not comply with the Federal Regulations (21 CFR Sub chapter 1) as administered by the Center for Devices and Radiological health. Purchaser acknowledges that his/her products must comply with these regulations before they can be sold to a customer. The output light from this product is harmful to a human body even if it is invisible. Avoid looking at the output of this product directly, or through a lens during operation. Observance of operation should be through a TV camera or related equipment. Refer to IEC 825-1 and 21 CFR 1040.10-1040.11 as a radiation safety standard for laser products.

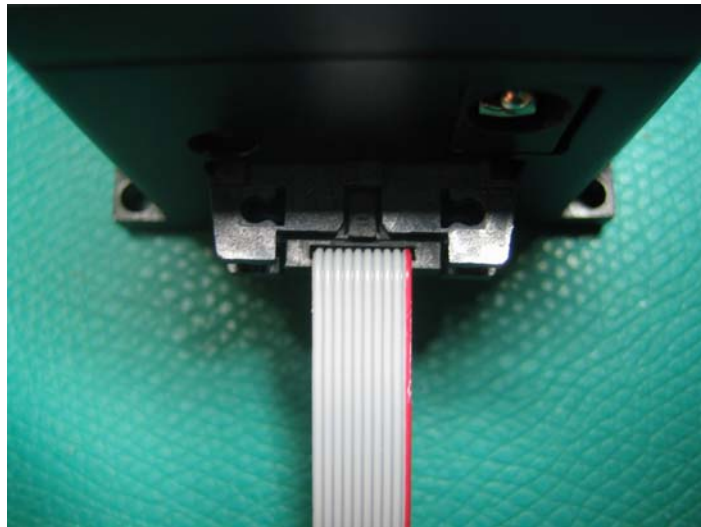
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| | |
|-------------------------------|------------------------------|
| Operation Voltage | 9V+/- 0.5V DC |
| Operation Current | TEC Max 2.5 A, LD Max 140mA |
| Operation Temperature | 0°C to 40°C |
| Warm Up Time | 2 minutes |
| Laser Diode Life Time | 5000hrs(MTBF) |
| Mechanical Size(Box) | 100mm(L)X44mm(W)X38.5mm(H) |
| Mechanical Size(Tube) | φ40mmX116.3mm |
| RF Input(for tube) | SMA Receptacle |
| RF Input(for box) | SAMTEC #: MMCX-J-P-X-RA-TH1* |
| Electrical Interface(for box) | SAMTEC #: EHF-105-01-L-D-RA* |
| Warranty | Limited One Year |

*You can find mating connector information at www.samtec.com

Electrical Pin Assignment:

| Part Number | Function |
|-------------|---|
| Pin 1 | +9V DC |
| Pin 2 | +9V DC |
| Pin 3 | +9V DC |
| Pin 4 | +9V DC |
| Pin 5 | Power GND |
| Pin 6 | Power GND |
| Pin 7 | Power GND |
| Pin 8 | Power GND |
| Pin 9 | Power Setting, 0V Max power, 2.5V Min Power |
| Pin 10 | Internal Testing Pin |



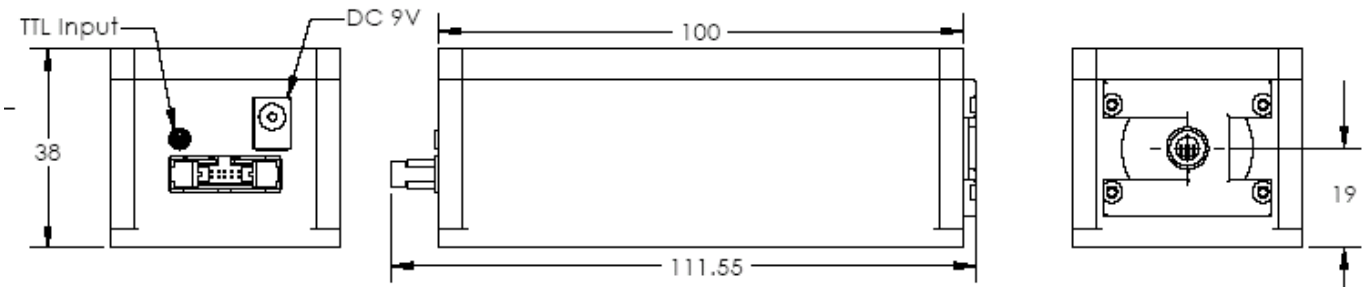
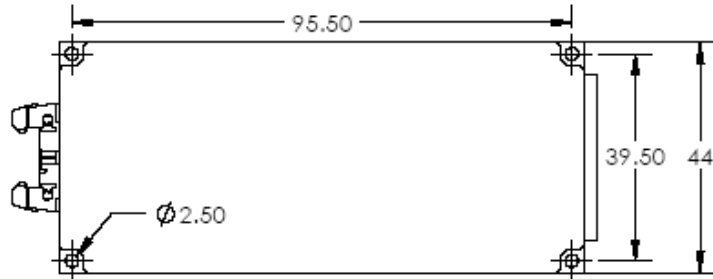
Pin 10 Pin1

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RgBLase LLC follows a policy of continuous product improvement. Specifications are subject to change without notice.

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Mechanical Dimension:



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