

375nm Temperature Stabilized Semiconductor Laser Module

Key Features:

- ◆ Fiber Coupled or Free Space
- ◆ Low Power Consumption
- ◆ 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™375 Violet Blue Laser Module is a highly integrated diode laser module with thermal electrical cooler, laser power control and protection circuits. For free space application, you can choose either collimated circular beam at 1.3mm diameter or collimated elliptical beam at 1.3mmX2.6mm.

For fiber coupling, you can choose single mode fiber, polarization maintain fiber, 50um, 100um, 200um and 400um core diameter multi mode fiber with FC/PC or SMA connector.

FreeBeam™375 features very low optical noise and up to 100 KHz TTL modulation capability. Laser output power can be remotely controlled with 0 ~ 5V DC voltage through electrical cable connected or locally controlled with potential meter mounted on the back panel. The FreeBeam™375 Violet Blue Laser Module comes with two different packages for you to choose from, box style and tube style.



The FreeBeam™375 Violet Laser Module is a Class III b laser product.



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Specifications:

Part Number	FBB-375-xxx
Wavelength	370nm to 380nm
Output Power	Single Mode 20mW and 70mW, multi Mode 190mW
Noise(RMS)	<0.3%
Power stability	<2%(2 hours)
Beam pointing stability	<10urad/°C
Polarization	100 : 1
Beam diameter(TEM00)	Elliptical 2.6X1.3mm or Circular 1.3mm
Beam diameter(multi mode)	4mmX4mm
Beam divergence(TEM00)	0.4 X 0.6 mrad
Beam divergence(Multi mode)	<5mrad
Operation Voltage	9V+/- 0.5V DC
Operation Current	TEC Max 2.5 A, LD Max 140mA
Operation Temperature	0°C to 40°C(case)
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*

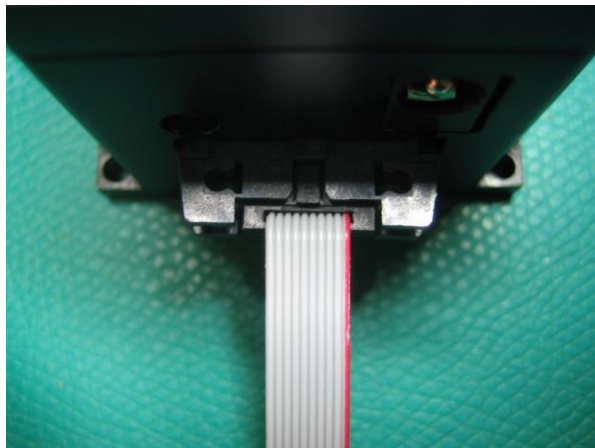
*You can find mating connector information at www.samtec.com

Available Laser Output Power:

Output Power Level(mW)	6	10	20	70	120	160	190
Free Space TEM00 Mode		√	√	√			
Free Space Multi Transverse Mode							√
Single Mode Fiber Coupling	√						
50um Multi Mode Fiber coupling		√		√			
100um Multi Mode Fiber coupling		√			√		
200um Multi Mode Fiber coupling			√			√	
400um Multi Mode Fiber coupling			√			√	

Electrical Pin Assignment:

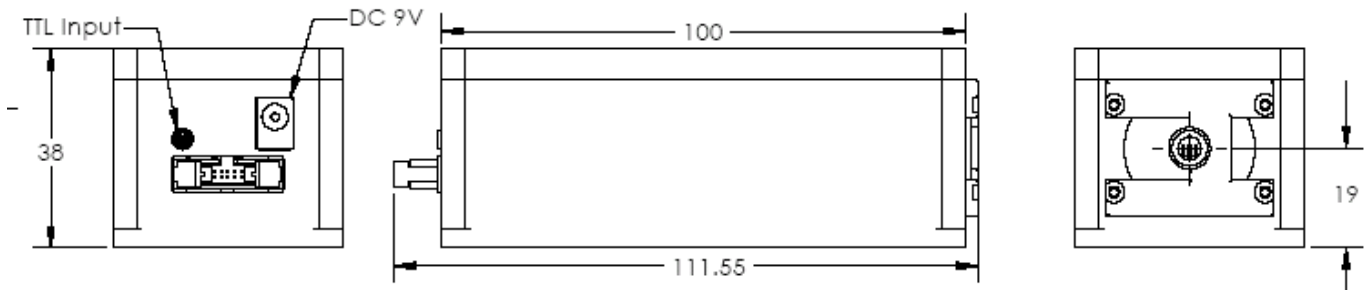
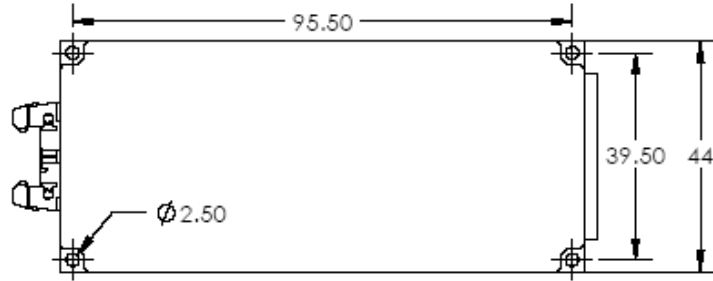
Number	Function
Pin 1	+9V DC
Pin 2	+9V DC
Pin 3	+9V DC
Pin 4	+9V DC
Pin 5	Power GND
Pin 6	Power GND
Pin 7	Power GND
Pin 8	Power GND
Pin 9	Power Setting
Pin 10	Internal Testing Pin



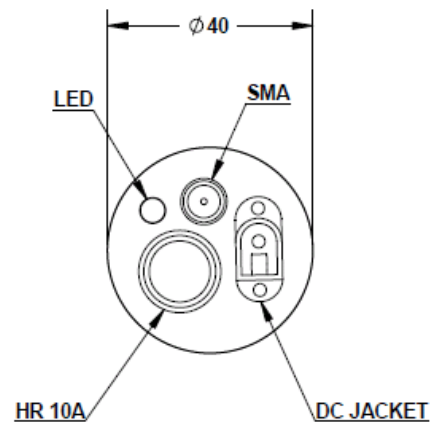
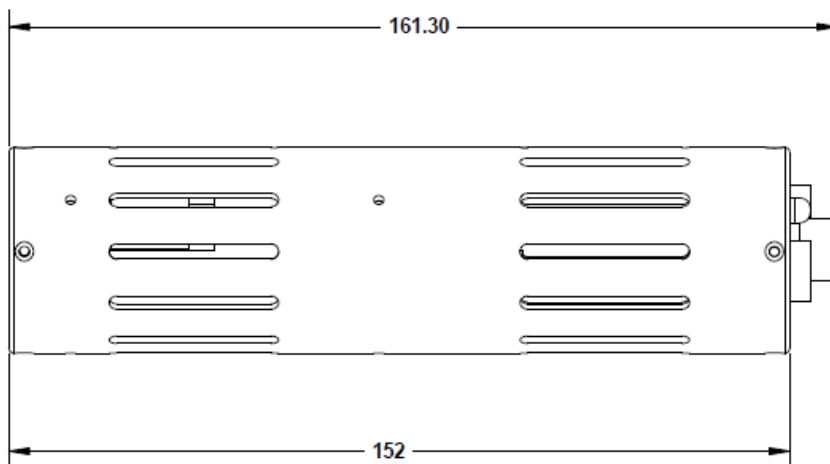
Pin 10 Pin 1

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Free Space Mechanical Dimension (BOX):

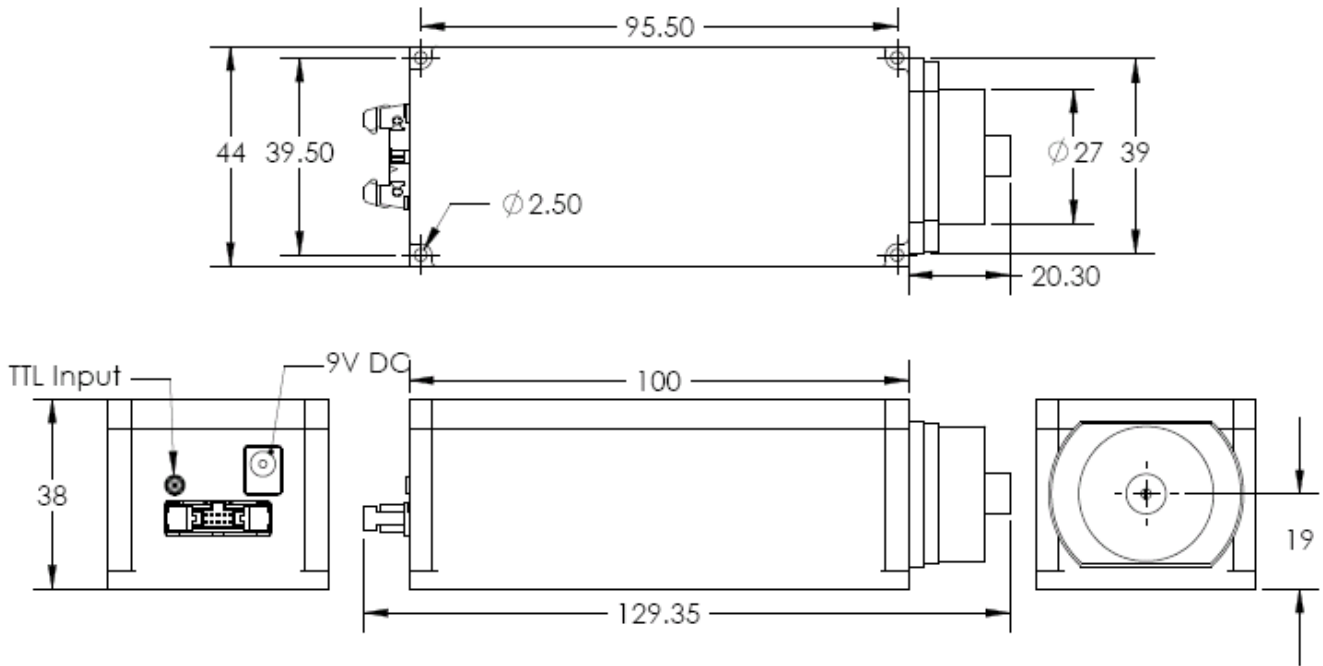


Free Space Mechanical Dimension (Tube):



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Fiber Coupled Mechanical Dimension:



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.

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