

## Wavelength Stabilized Raman Laser Module

### Key Features:

- ◆ Ultra Stable Wavelength
- ◆ Narrow Spectrum Width
- ◆ Circularized Laser Beam
- ◆ Ultra Stable Optical Power
- ◆ TTL Modulation Option
- ◆ Low Optical Noise
- ◆ Long Coherence length

### Applications:

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



The FreeBeam™780 Raman Laser Module is a highly integrated diode laser module with very narrow spectrum width and stabilized peak wavelength through external cavity technology. It can also have a fiber coupled output with single mode fiber, polarization maintain fiber, 50um, 100um, 200um and 400um core diameter multi mode fiber.



FreeBeam™780 Raman laser module 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™780 Raman Laser Module is a Class III b laser product.

## Wavelength Stabilized Raman Laser Module

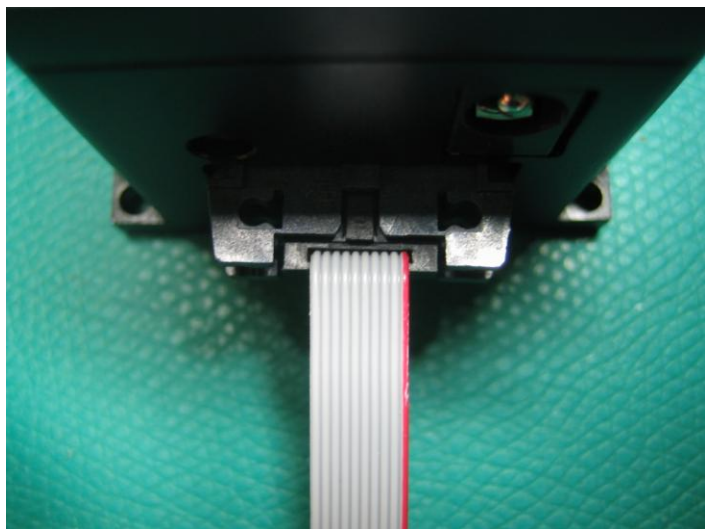
**Specifications:**

Wavelength	780+/-0.5nm
Output Power	75mW
Noise(RMS)	<0.2%
Longitudinal Mode	Single Mode
Spectrum Width	0.001nm
Coherence length	>1 m
Central wavelength stability	0.01nm
Power stability	<2%
Beam pointing stability	<10urad/°C
Polarization	100 : 1
Beam diameter	2.6 X 1.3mm(Elliptical Beam)
Beam divergence	0.6 X 0.9mrad(Elliptical Beam)
Operation Voltage	9V+/- 0.5V DC
Operation Current	TEC Max 2.5 A, LD Max 140mA
Operation Temperature	0°C to 40°C ( laser case)
Warm Up Time	5 minutes
Laser Diode Life Time	10000hrs(MTBF)
Mechanical Size	100mm(L)X44mm(W)X38.5mm(H)
9V DC Power Supply Size	110mm(L)X50mm(W)X20mm(H)
RF Input(for box)	SAMTEC #: MMCX-J-P-X-RA-TH1*
Electrical Interface(for box)	SAMTEC #: EHF-105-01-L-D-RA*
Fiber type	Single mode and Multi mode(50um, 100um, 200um, 400um)
Connector Type	FC/PC or SMA
Warranty	Limited One Year

\*You can find mating connector information at [www.samtec.com](http://www.samtec.com)

**Electrical Pin Assignment:**

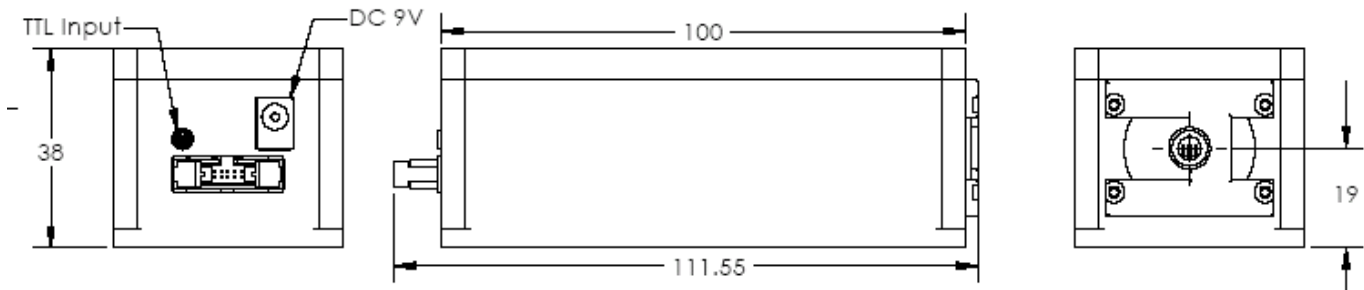
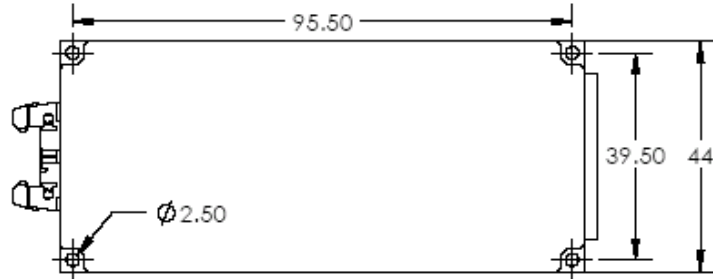
Number	Function
Pin 1	+9V DC
Pin 2	+9V DC
Pin 3	+9V DC
Pin 4	+9V DC
Pin 5	Power GND
Pin 6	Power GND
Pin 7	Power GND
Pin 8	Power GND
Pin 9	Power Setting
Pin 10	Internal Testing Pin



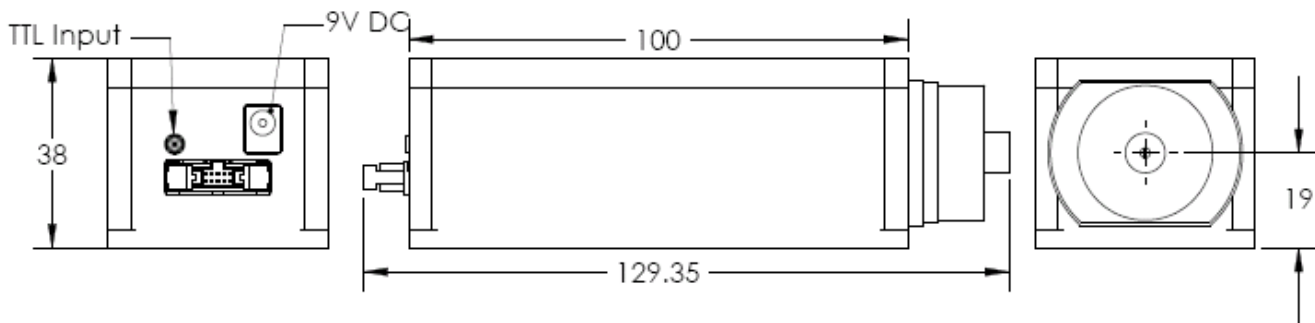
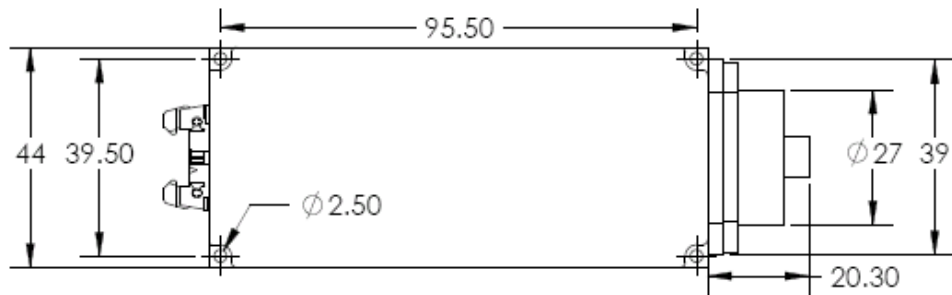
Pin 10 Pin 1

## Wavelength Stabilized Raman Laser Module

### Free Space Mechanical Dimension:



### 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.