

Integrated Raman Probe

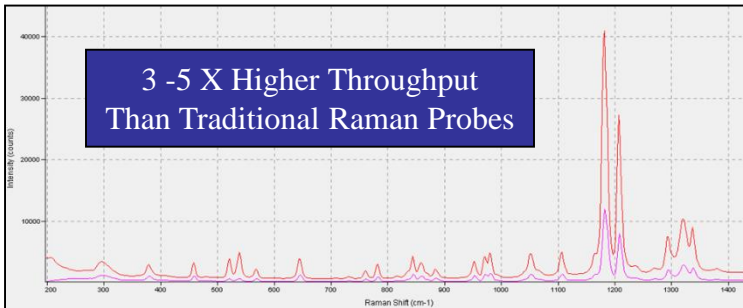
R0785IP0350B-001-TH



RPMC, Inc. is proud to introduce an ultra-high throughput integrated Raman probe. This novel device includes an integrated wavelength stabilized laser source with Raman filter packs, beam shaping optics and high efficiency Raman spectra collection optics. The probe interfaces with any fiber coupled spectrometer and simplifies operation and set-up.

The Integrated Raman Probe incorporates our wavelength stabilized hybrid external cavity laser (HECL) with a proprietary optical design to offer unmatched performance (typically 3x -5x over traditional Raman probes).

RPMC's Integrated Raman probe also comes complete with a UL/CE, and IEC compliant control box providing a variety of power control options including TTL, analog, and USB.



Comparison of Raman Spectra taken on Same sample with the same excitation power, same spectrometer, and same integration times

Features:

- 785 nm Wavelength Stabilized Excitation Source
- High Throughput Optical Design with 100cm⁻¹ Cut-on
- User Friendly Ergonomic Design
- Distance Regulator for Easy Sampling
- Custom High-throughput Optical Fiber
- External Control Box for Power Adjustment and Compliance with CE, UL, and CDRH.

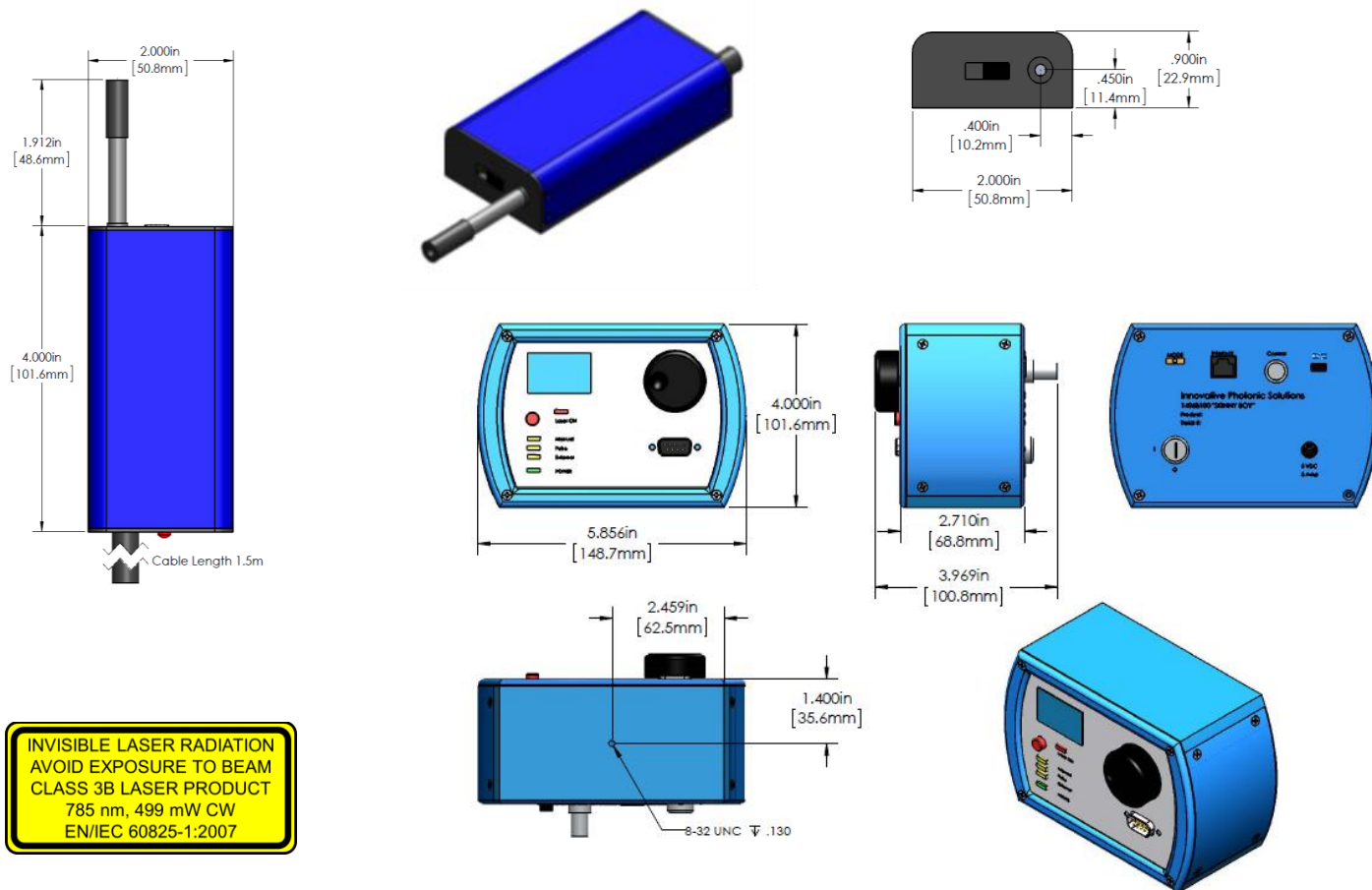
General Specifications	
Excitation	Integral 785nm wavelength stabilized laser with <0.15nm FWHM bandwidth
Collection	1.5m long, proprietary high throughput fiber with SMA905 male connector
Cut-on	100cm ⁻¹ cut-on with >OD 6 Rayleigh rejection
Electronic Connection	DB9 cable with safety interlock
Power Control	Manual power adjustment knob, Analog / TLL modulation via BNC connector, or MicroUSB
Power Supply	3 A, 5VDC
Shaft	1.6inch (40.5 mm) length by 0.25inch (6.35mm) diameter 316L Stainless Steel
Working Distance	9mm from shaft, or 0.5mm from distance regulator. (4.5 mm and 7 mm options available upon request)
Operating Temperature	10°C to 40°C
Storage Temperature	-20°C to 80°C
Humidity	0 - 80% non-condensing

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Detailed Laser Specifications

Parameter	Unit	Min	Typ	Max	Notes
Laser Optical output power	mW	350	420	495	
Output power stability	%		± 1		
Peak wavelength	nm	784.5	785	785.5	
3 dB bandwidth (FWHM)	nm		0.1	0.15	
Operating Temperature Range (Case)	Deg C	10		40	Case Temperature
Power Consumption	W		3	7	Case temp between 10 and 40 deg C
Wavelength Stability	Seconds			180	Cold Start - to < 1 wavenumber
				1	Warm Start - to < 1 wavenumber
				3	Warm Start - to < 0.1 wavenumber
Absolute Maximum Ratings					
Laser Module Operational Current	A		1	3	
Laser Module Operational Voltage	V	4.9	5	5.1	Compliance

Mechanical Specifications:



**INVISIBLE LASER RADIATION
 AVOID EXPOSURE TO BEAM
 CLASS 3B LASER PRODUCT
 785 nm, 499 mW CW
 EN/IEC 60825-1:2007**