SPECTRA SOLUTIONS, INC.
Innovation through Spectroscopy

Dual Wavelength Raman Probe

- **Unique Raman probe with dual wavelength Raman measurement**
- **Colinear optical design for combining 2 probe optics into one**
- **Both laser beams focus onto the same spot**

High throughput optics and a backscattering probe optical design are incorporated into our Raman probes, resulting in a highly efficeint probe for Raman measurements.

- **Available with** 532/785 nm, 405/785 nm and 785/1064 nm laser combinations
- **Narrow bandwidth bandpass filter** is utilized in the excitation optical train to filter out unwanted silica background generated by the excitation laser in the optical fiber.
- **High Rayleigh rejection long-pass edge blocking filter** (optical density $>10^{-6}$) is also incorporated in the collection optical train to prevent the laser line from being transmitted into the collection optical fiber.

FEATURES

- **Raman probe** that is ideal for routine laboratory or process measurement applications at 2 different Raman spectral regions.
- Interrogation of the same sample area with **2 different lasers.**
- Can be used for **Raman measurements of all types of samples.**
- Can be used through **glass and plastic containers.**
- Probe body is encased in a hard **anodized aluminum housing.**
- **Removable focusing lens barrel**
- **Optical fibers are removable,** allowing the user the flexibility of using the proper fiber core optimized for a specific Raman instrument.

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Specifications

Excitation Wavelength	405/785 nm, 532/785 nm and 785/1064 nm
Spectral Range	100-4000 cm-1 (The ultimate range is spectrograph/detector dependent)
Spot Size at the Sample	~100 microns for 100 micron core excitation optical fiber
Focal Length	9 mm standard (12,15, & 18 mm optional). Note: Probe efficiency decreases with increasing focal length)
Focusing Lens Barrel	Non-immersion or sealed probe shaft
Probe Body Dimensions	3.8" L x 1.5” diameter
Probe Body Material	hard anodized aluminum
Probe Shaft Dimensions	3/8”diameter x 6" length
Probe Shaft Material	316 stainless steel (other metals such as Hastelloy and Inconel are available)
Filter Efficiency	O.D >6 at laser wavelength
Operating Temperature	0-85 ºC (non-immersion shaft), 0-325 ºC (sealed shaft)
Maximum Operating Pressure	15 psi (non-immersion shaft), 6000 psi (sealed shaft)
Fiber Configuration	100/200 micron core standard, custom optical fiber cores available
Fiber Optic Cable	5 m reinforced stainless steel armor cable standard, custom lengths available
Coupling System	FC Connector standard, SMA connector also available.
Part Number	SPS-R532/785, SPS-R405/785, SPS-R785/1064

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