SPECTRA SOLUTIONS, INC.
Innovation through Spectroscopy

General Purpose Raman Probe

- **Ideal for laboratory Raman analysis**
- **High collection efficiency and effective laser line filtering**
- **Customizable optical fiber cable and focusing lens shaft**

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

- **Ideal for** Raman measurements of various samples including solids, liquids and gases
- **Available in** various laser excitation wavelengths in the visible to the near-infrared.
- **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

- **Low-cost Raman probe** that is ideal for routine laboratory Raman measurement applications.
- 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.**
- **Focusing lens** is housed in a removable stainless steel tube, allowing the flexibility of using different focal length lens.
- **Optical fibers are also 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, 514, 532, 633, 670, 671, 785, 808 nm. Other wavelengths available
Spectral Range	100-4000 cm^{-1} (The ultimate range is spectrograph/detector dependent.)
Focal Length	9 mm standard (12,15, & 18 mm optional). Note: Probe efficiency decreases with increasing focal length)
Spot Diameter at the Sample	100 microns for standard fiber (fiber core dependent)
Beam Diameter	excitation fiber core dependent
Working Distance	7 mm for standard lens
Numerical Aperture	0.22 with standard lens
Probe Body Dimensions	2.25” L x 0.96” W x 0.58” H
Probe Body Material	hard anodized aluminum
Probe Shaft Dimensions	3/8” diameter x 2” length (custom lengths available)
Probe Shaft Material	316 stainless steel
Filter Efficiency	OD >6 at laser wavelength
Operating Temperature	0-85 ºC
Operating Pressure	15 psi
Fiber Configuration	100/100 micron core standard, custom optical fiber cores available
Fiber Optic Cable	3 m stainless steel armor cable standard, custom length available
Coupling System	FC connector standard, SMA connector also available
Part Number	SPS-R

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