

# Long Working Distance 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 efficient probe for Raman measurements.

- **Available with** 532/785 nm or 405/785 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.

## Specifications

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