

Long Working Distance Raman Probe



- **Long working distance for sample standoff analysis**
- **General purpose or process probe body construction**

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 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

- **Raman probe** that is ideal for routine laboratory Raman or process 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 or stainless steel housing** for process probes.
- **Focusing lens is removable** to easily change the probe working distance
- For general purpose probe body, **optical fibers are removable**, allowing the user the flexibility of using the proper fiber core optimized for a specific Raman instrument.

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	20 mm to 100 mm
Spot Size at the Sample	~100 microns for 100 micron core excitation optical fiber
Working Distance	20 to 100 mm
Numerical Aperture	0.22 with standard lens (40 mm focal length lens)
Probe Body Dimensions	2.25" L x 0.96" W x 0.58" H for general purpose probe, 4.8" L x 1" diameter for process probe
Probe Body Material	hard anodized aluminum for general purpose probe and 316 SS for process probe
Probe Shaft Dimensions	1.125" diameter x 3.8" length
Probe Shaft Material	316 stainless steel
Filter Efficiency	O.D >6 at laser wavelength
Operating Temperature	0-85 °C
Maximum Operating Pressure	15 psi
Fiber Configuration	100/100 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-RWD