









Raman Sampling Tools

W2 Innovations offers a series of Raman sampling options: Raman probes, adapters, and signal enhancing accessories for general laboratory use or for industrial monitoring. They all have high collection efficiency, and are optimized for each excitation laser wavelength. The built-in narrow laser bandpass filter and high rejection longpass filter are matched to allow for efficiently passing laser band, eliminating fiber optic background signal while achieving sharp cut at as low wavenumber as possible ($< 60 \text{ cm}^{-1}$ for 785 nm excitation). In addition, they come with either FC or SMA connection at the probe (without pigtail fiber cable) for easy and convenient service.

The full line of Raman sampling products listed below provides solutions to different sampling requirements. They are available for all types of lasers (i.e., lasers at different excitation wavelengths) used in Raman spectroscopy.

Model						
Description	Collinear design with macro spot size for general use	1" optics for high throughput and long working distance sampling	Equipped with a microscope objective for micro sampling	Equipped with an immersion probe tip for process monitoring	For converting a fiber-base Raman spectrometer to a Raman microscope	Two probes in one compact unit with 2 lasers at the same spot; options of macro or micro spot
Laser Wavelength	514 nm, 532 nm, 633 nm, 785 nm, 830 nm, 1064 nm, or other laser wavelengths				Single laser, or dual lasers 532/785 nm, or three selective lasers	532/785 nm (Duplex Raman Probe) or other combinations of two lasers; three selective lasers available (Triplex Raman Probe)
Spectral Range	200 - 4000 cm^{-1} standard for all laser wavelengths; longer coverage for some laser wavelengths; lower wavenumbers (for example, $< 60 \text{ cm}^{-1}$ for 785 nm, $< 90 \text{ cm}^{-1}$ for 532 nm) available upon request.					
Working Distance	10 mm	> 20 mm	< 10 mm	2 – 10 mm	< 10 mm	> 10 mm (macro)/ < 10 mm (micro)
Sampling Size	> 100 μm	> 100 μm	< 50 μm	> 100 μm	< 10 μm	> 100 μm (macro)/ < 50 μm (micro)
Fiber Optic Connector	Choice of FC or SMA connector at the probe, no pigtail fibers. Recommended laser fiber core diameter 50 - 105 μm , signal fiber core diameter > 100 μm □					
Construction	Black anodized body with stainless probe tip					
Dimension (mm)	75 (L) x 40 (W) x 25 (H)	121 (L) x 75 (W) x 35 (H)	150 (L) x 75 (W) x 38 (H)	250 mm tube	200 (L) x 138 (W) x 54 (H)	75 (L) x 70 (W) x 25 (H)

In addition to the above standard Raman sampling products, we also offer customized sampling solutions to meet your specific needs. Please send us your special requests.

W2 Innovations, Inc.

364 Brighton Street, Belmont, MA 02478 USA Tel: (+1) 617.216.3606 info@w2innovations.com www.w2innovations.com