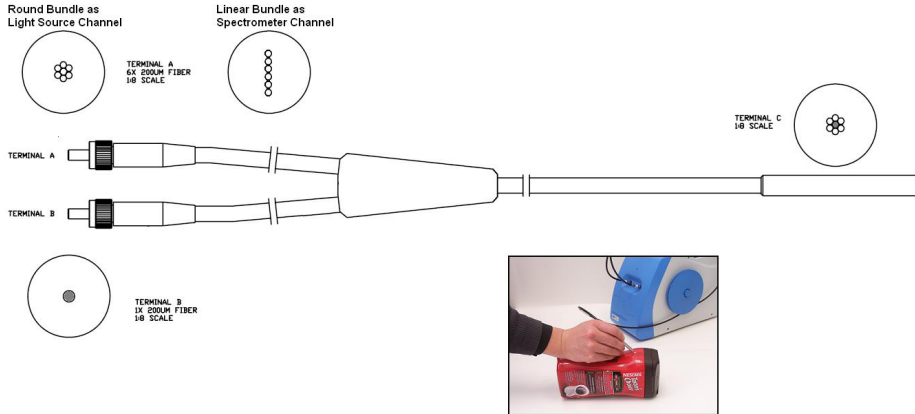


FRP Series Fiber Reflectance Probes



A fiber reflectance probe, such as the FRP series combines optical fibers at the sample end with the bundle bifurcated into two channels for connection to a light source and a spectrometer.

A fiber optic reflectance probe can measure either diffuse or specular reflectance from surfaces. When positioned at an angle to the surface normal, it measures diffuse reflectance. When positioned normal to the surface, 0° angle of incidence, it measures specular reflectance.

Highlights:

- Stacked Fiber Input

Applications:

- Diffuse Reflectance
- Specular Reflectance

All Standard FRP reflectance probes consist of a bundle of 7 optical fibers in a stainless steel ferrule (illustrated as Terminal C). Assemblies are available with UV or NIR grade fused silica optical fibers with standard fiber core diameters of 200 µm.

The light source and spectrometer channels feature standard SMA 905 connectors. The fiber configuration for these channels consists of two options. For use with B&W Tek's CCD spectrometers that have a 200 µm pixel height, a single fiber channel (Terminal B) serves as the spectrometer channel. A round bundle of six fibers serves as the light source channel. For all other B&W Tek spectrometers with larger pixel height, a linear bundle of six fibers is best used as the spectrometer channel which will align to a spectrometer entrance slit.

Specifications:

Core Diameter (µm)	200 ± 4
Core Material	silica
Cladding Material	doped silica
Buffer Material	Polyimide
Jacket Material	PVC
Channel Connectors	SMA905
Sample End Ferrule	3" long x 1/4" diameter
Concentricity	± 3 µm
Numerical Aperture (NA)	0.22 ± 0.02
Acceptance Cone (Full Angle)	25.4°
Overall Length	1.5 m
Operating Temperature	up to +80°C (176°F)

Ordering Information:

MODEL NUMBER	TYPE	FIBER	SPECTRAL RANGE
FRP-200-0.22-1.5-UV	Light Source Channel Round Bundle	UV Grade (High -OH)	190 nm to 1100 nm
FRP-200-0.22-1.5-RS-UV	Spectrometer Channel Linear Bundle		
FRP-200-0.22-1.5-NIR	Light Source Channel Round Bundle	NIR Grade (Low -OH)	380 nm to 2400 nm
FRP-200-0.22-1.5-RS-NIR	Spectrometer Channel Linear Bundle		