

Spectrometer Accessory Fiber Patch Cords



The FPC series of Fiber Patch Cords are fiber optic cables terminated with fiber optic connectors on both ends. These patch cords connect with ease to B&W Tek spectrometers, light sources and sampling accessories. The fiber cables are available in single strand UV or NIR grade fused silica optical fiber with various core diameters.

For applications in the Deep UV region (190nm - 325nm), effects of high levels of UV radiation on the transmission of a silica core optical fiber must be considered. Solarization changes depend on the type of fiber used as well as the intensity and spectral output of the UV source. The Deep UV Enhanced Fiber Patch Cord uses hydrogen loaded High -OH silica to provide the best resistance to solarization.

UV Grade Fiber Patch Cords use a High -OH content silica core for a spectral range of 190 nm to 1100 nm.

NIR Grade Fiber Patch Cords use a Low -OH content silica core for a spectral range of 350nm to 2400nm.

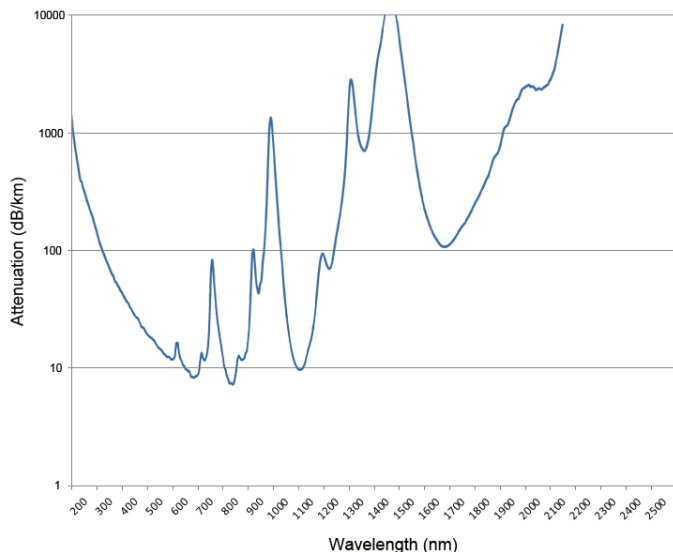
Highlights:

- Multimode Step Index Fiber
- Radiation Resistant
- Excellent Concentricity
- Broad Temperature Range
- Vacuum Compatible

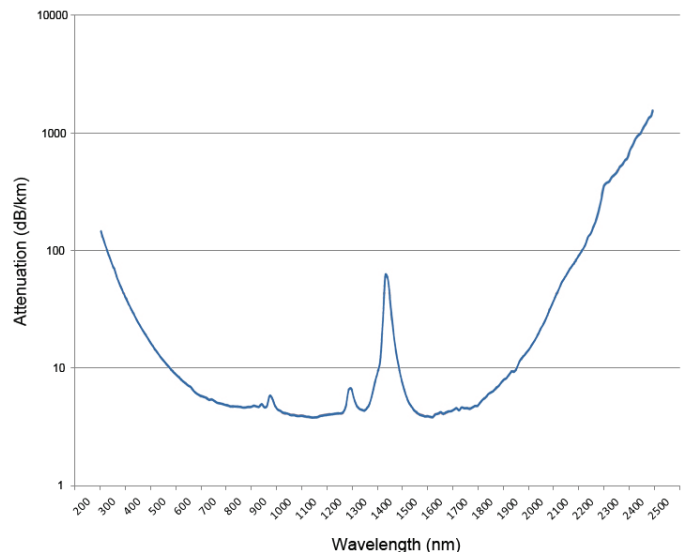
Applications:

- General Spectroscopy
- Transmission
- Absorption
- Fluorescence
- Spectrophotometry

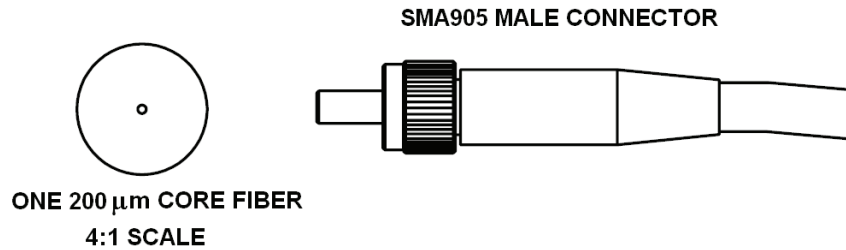
Typical Attenuation (UV):



Typical Attenuation (NIR):



The FPC series is terminated with standard SMA 905 connectors. SMA style connectors are most commonly used with multimode fibers, especially large core fibers. This connector is characterized by a 1/4-36 UNS-2B thread coupling mechanism and a cylindrical ferrule of 1/8 inch nominal diameter.



Specifications:

COMMON SPECIFICATIONS	
Core Material	Silica
Cladding Material	Doped Silica
Buffer Material	Polyimide
Jacket Material	PVC
Connectors	SMA905
Concentricity	± 3 μm
Numerical Aperture (NA)	0.22 ± 0.02
Acceptance Cone (Full Angle)	25.4 degrees
Overall Length	1.5 m (SRUV 1.0 m)
Operating Temperature	up to +80°C (176°F)

Deep UV Enhanced Fiber (Solarization Resistant)	
Spectral range 190 nm to 1100 nm	
Model No.	Core Diameter (μm)
FPC-600-0.22-1-SRUV	600 ± 10

UV Grade Fiber (High -OH)	
Spectral range 190 nm to 1100 nm	
Model No.	Core Diameter (μm)
FPC-50-0.22-1.5-UV	50 ± 2
FPC-100-0.22-1.5-UV	100 ± 3
FPC-200-0.22-1.5-UV	200 ± 4
FPC-400-0.22-1.5-UV	400 ± 8
FPC-600-0.22-1.5-UV	600 ± 10
FPC-1000-0.22-1.5-UV	1000 ± 20

NIR Grade Fiber (Low -OH)	
Spectral range 350 nm to 2400 nm	
Model No.	Core Diameter (μm)
FPC-50-0.22-1.5-NIR	50 ± 2
FPC-100-0.22-1.5-NIR	100 ± 3
FPC-200-0.22-1.5-NIR	200 ± 4
FPC-400-0.22-1.5-NIR	400 ± 8
FPC-600-0.22-1.5-NIR	600 ± 10
FPC-1000-0.22-1.5-NIR	1000 ± 20