

Mid-Infrared Transport Fiber

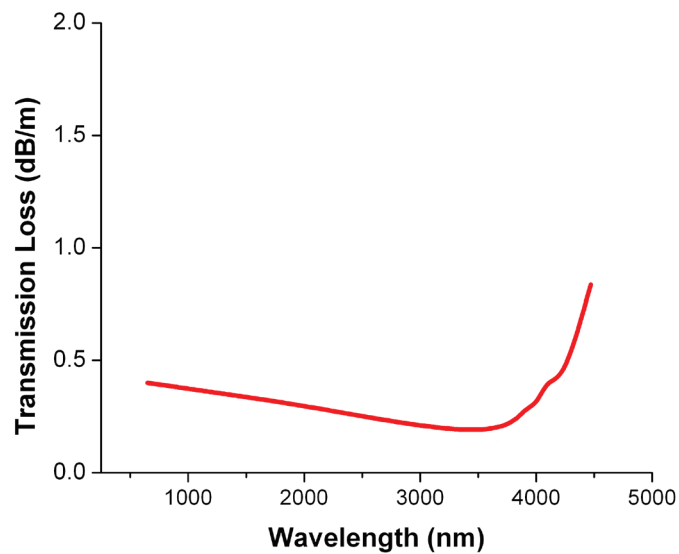
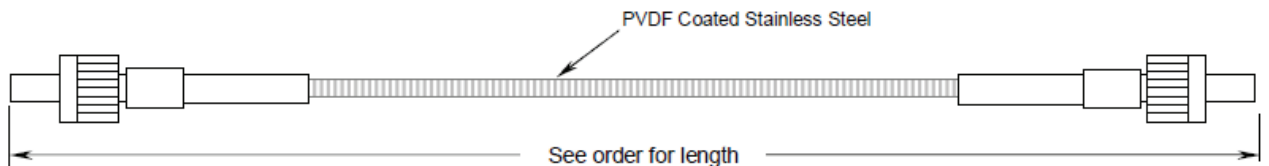
Ruggedized Multimode Patchcord Assemblies



Features

- Ultra-low loss in mid-IR
- Transparent from visible to mid-IR
- Broad-band anti-reflection coatings
- Standard SMA connectors
- Capable of transporting high power
- High-temperature oxide glass
- Reinforced armored cable

Mechanical Outline:



Typical Fiber Spectral Attenuation

Performance | Reliability | Innovation

Parameter

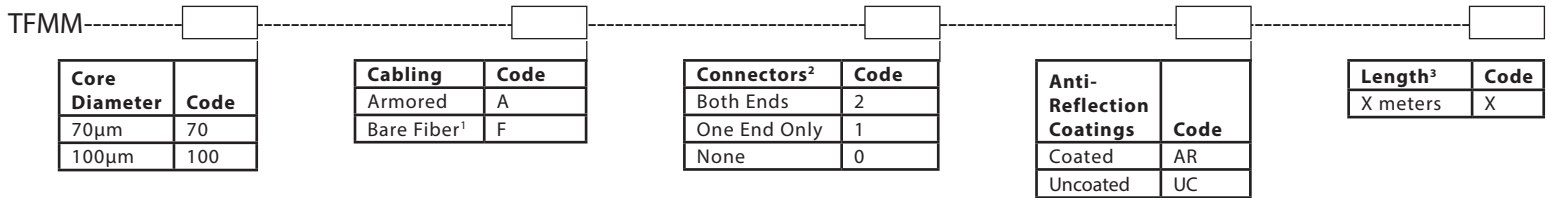
Standard Fiber Specification

Transmission Range (nm)	<500 to >4500
Typical Core Refractive Index (@1550nm)	2.0025
Numerical Aperture ¹	0.22
Typical Attenuation	<0.25@3500nm
Core Non-circularity	<<1%
Core/Clad Concentricity Error (μm)	<1
Core Diameter (μm) ²	70 and 100
Cladding Diameter (μm) ³	170
Glass Structure Core/Cladding	Tellurite Glass
Fiber Jacket	PVDF-Coated Stainless Steel Armored Cable
Broadband AR coatings (optional) ^{4,5}	R _{av} < 2% @ 2000-4500nm
Tensile Strength Bare Fiber (kpsi)	>60
Armored Cable Bend Radius (cm)	2.5
Bare Fiber Bend Radius (cm)	1.25

FOOTNOTES

1. Alternate NAs available: 0.05 < NA < 0.6
2. Alternate diameters available
3. Alternate diameters optional
4. Only available on armored fibers
5. Typically <0.6% @ 3μm

Ordering Example: TFMM-100-A-2-UC-10, multimode armored fiber with 100μm core, both ends with SMA connectors, uncoated and 10m long



FOOTNOTES

1. Bare fiber has a polyacrylate coating ~295μm
2. Armored cable must have connectors at both ends
3. Minimum fiber length is 1m

Custom fiber capabilities

NP is vertically integrated, controlling all aspects of the manufacture of optical fiber. NA can be tailored from 0.05 to 0.6 and wide variety of fiber core and cladding diameters are available. Please contact us directly to discuss customized fiber configurations that can be optimized for your application.

NP Photonics mid-IR fibers are protected by a 12 month warranty. All components and assemblies are unconditionally warranted to be free of defects in workmanship and materials for the warranty period, beginning from the date of shipment. This warranty is in lieu of all other warranties, expressed or implied, and does not cover incidental or consequential loss. This warranty does not apply to devices damaged due to operating conditions outside of the specified parameters. Modified warranties for OEM customers are available.



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