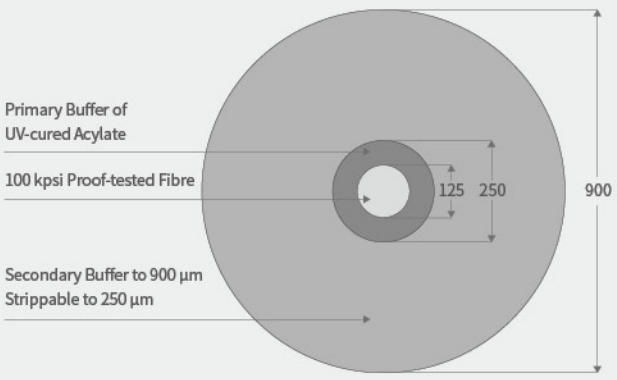
ETFE Tight Buffered Fibre

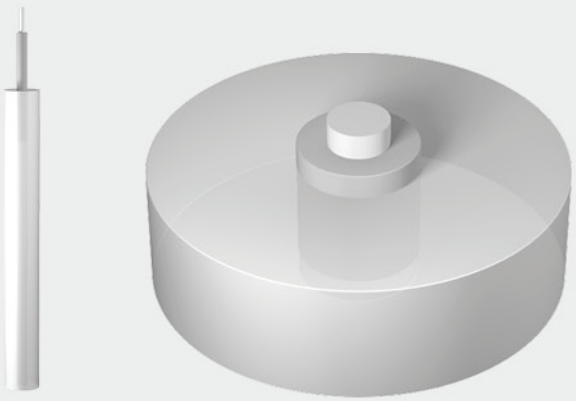
ETFE is an engineering plastic with high performance, and it is a copolymer of ethylene and tetrafluoroethylene, with excellent general property, such as outstanding resistance to heat and flame, low temperature resistance, insulation resistance, chemical resistance, and particular less viscous performance. Therefore, ETFE tight buffered fibre also has above-mentioned performance, and can be applied to heat resistance, flame retardant and other special field.

All of YOFC ETFE tight buffered fibre have past 100kpsi proof-test, with a primary coating of UV-cured acrylate to a diameter of 250μm and a secondary ETFE buffer to 900μm.

The primary coating and secondary buffer could be mechanically removed to the 125μm glass diameter in one step, which could be used for direct termination with connectors. Also it permits mechanical stripping in short lengths (about 15mm) to remove the secondary buffer and leave the 250μm primary coating intact, which is available for splicing to similar buffered fibres from loose-tube gel-filled cables.

900 μm ETFE Tight Buffered Fibre





Characteristics

- Highest flame retardant grade of UL94 V-0
- Flexibility at low temperature
- Retention of properties after aging at elevated temperatures up to 150°C

Applications

- Temperature and stress monitoring
- Hazardous environment connectivity
- Linking optical communication modules/optical link couplers
- Providing an effective resistance to water vapor, oils/fuels, acids/alkalis, and solvents, which could adversely affect the fibre's signal transmission capabilities

Dimension of TBF (Customer sizes are available through minimum order.)

Outer Diameter (μm)	Core Concentricity Error	Non-circularity
900 ± 50	<6%	<3%

Material Properties

Flame Retardant Grade	UL94 V-0	
Safety and Environment	RoHS	
Tubing Shrinkage @85°C, 4 hours	≤0.5%	
Property	Value	Test Method
Flexural Modulus (MPa)	641.1	ASTM D790
Tensile Strength at 23°C (MPa)	37.9	ASTM D1708
Elongation at 23°C (%)	> 300	ASTM D1708
Melt Point (°C)	220 - 255	ASTM D3159
LOI	34	ASTM D2863

Fibre Attenuation

Fibre	Typical Value (dB/km)				Max Value (dB/km)			
-	SM		MM		SM		MM	
Wavelength (nm)	1310	1550	850	1300	1310	1550	850	1300
Attenuation	0.338	0.193	2.85	0.60	0.380	0.250	3.50	1.50

Environmental Proerties

Operating (°C)	Static Diameter (mm)	Storage (°C)	Dynamic Diameter (mm)	Installation (°C)
-55 to + 150	10 x Tight tube diameter	-40 to + 80	20 x Tight tube diameter	-20 to + 50

Product Colour

	Blue	BU		Orange	OR		Green	GN
	Brown	BR		Gray	GY		White	WHT
	Red	RD		Black	BK		Yellow	YW
	Violet	VT		Pink	PN		Light Blue	LB

· Customer colors are available through minimum order
· Customized : YOFC can provide different tight buffered materials, such as ETFE, LCP, TPEE, PFA, PEEK, PA