

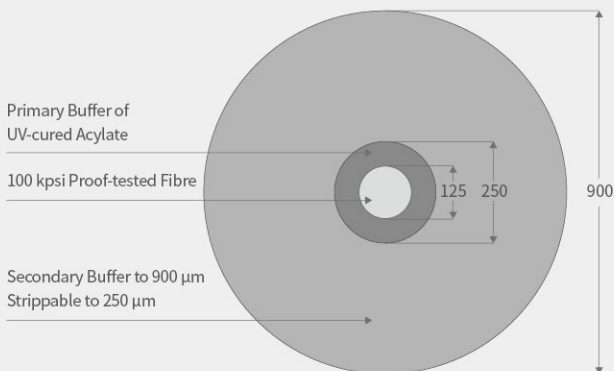
# ETFE Tight Buffered Fibre

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 250 $\mu$ m and a secondary ETFE buffer to 900 $\mu$ m.

The primary coating and secondary buffer could be mechanically removed to the 125 $\mu$ m 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 250 $\mu$ m primary coating intact, which is available for splicing to similar buffered fibres from loose-tube gel-filled cables.

## 900 $\mu$ m 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
- Ultimate protection for fibre

## Application

- 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    | Unit | Test Method |
| Flexural Modulus                | 641.1    | MPa  | ASTM D790   |
| Tensile Strength at 23°C        | 37.9     | MPa  | ASTM D1708  |
| Elongation at 23°C              | >300     | %    | ASTM D1708  |
| Melt Point                      | 220~255  | °C   | ASTM D3159  |
| LOI                             | 34       |      | ASTM D2863  |








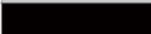




## Fibre Attenuation

| Fibre             | Typical Value (dB/km) |       |      |      | Max Value (dB/km) |       |      |      |
|-------------------|-----------------------|-------|------|------|-------------------|-------|------|------|
|                   | SM                    |       | MM   |      | SM                |       | MM   |      |
| Wavelength (nm)   | 1310                  | 1550  | 850  | 1300 | 1310              | 1550  | 850  | 1300 |
| Attenuation @23°C | 0.338                 | 0.193 | 2.85 | 0.60 | 0.380             | 0.250 | 3.50 | 1.50 |

## Environmental Properties

| Operating (°C) | Static Diameter (mm)     | Storage (°C) | Dynamic Diameter (mm)    | Installation (°C) |
|----------------|--------------------------|--------------|--------------------------|-------------------|
| -55 ~ +150     | 10 x Tight tube diameter | -40 ~ +80    | 20 x Tight tube diameter | -20 ~ +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, TPPEE, PFA, PEEK, PA.



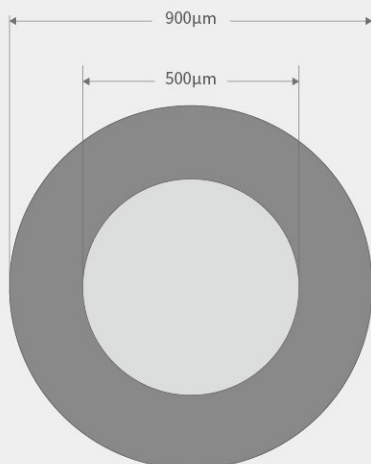
# 900 Micron ETFE Tubing

YOFc's 900 micron ETFE tubing can be employed as buffering material and provide additional protection for use with 250µm fibre.

Made from ETFE possessing, ETFE tubing has some excellent property of the material, such as resistance to heat and flame, and high specific dielectric strength, and gives optimal protection to 250µm fibre.

## Application

- protect bare fibre in any situation against mechanical damage during handling and installation
- provide an effective resistance to water vapor, oils/fuels, acids/alkalis, and solvents, which could adversely affect the fibre's signal transmission capabilities
- Excellent wear properties in many applications, and in cases of high voltage, radiant, medical equipments
- Can be easily installed over fibre up to more than 5 meters



## 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

## Dimension of Tubing

| Inner Diameter (μm) | Outer Diameter (μm) | Core Concentricity Error | Non-Circularity |
|---------------------|---------------------|--------------------------|-----------------|
| 500.0 ± 50.0        | 900.0 ± 50.0        | <6%                      | <3%             |





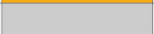







## Material Properties

| Flame Retardant Grade           | UL94 V-0 & RoHS          |         |      |             |
|---------------------------------|--------------------------|---------|------|-------------|
| Tubing Shrinkage @85°C, 4 hours | ≤2.0%                    |         |      |             |
| Material                        | Property                 | Value   | Unit | Test Method |
| ETFE                            | Flexural Modulus         | 641.1   | MPa  | ASTM D790   |
|                                 | Tensile Strength at 23°C | 37.9    | MPa  | ASTM D1708  |
|                                 | Elongation at 23°C       | >300    | %    | ASTM D1708  |
|                                 | Melt Point               | 220~255 | °C   | ASTM D3159  |
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|  | Red    | RD |  | Black  | BK |  | Yellow     | YW  |
|  | Violet | VT |  | Pink   | PN |  | Light Blue | LB  |

· Customer colors are available through minimum order.

· Remark: YOFC can provide different diameter ETFE tight buffered fibre of various fibre, according to the requirement of client.

[www.yofc.com](http://www.yofc.com)



This datasheet can only be a reference, but not a supplement to the contract. Please contact our sales people for more detailed information