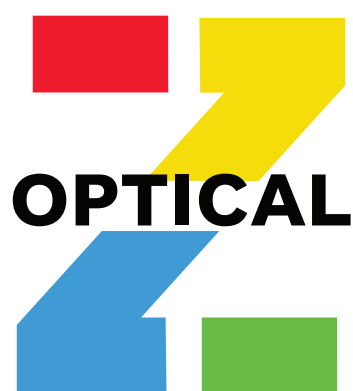


**ZHOUTONG  
OPTICAL**



**PRODUCT  
CATALOG**

# Spec Sheet

# T-FRP

## New Generation High Performance Reinforcement Material

TFRP, a new generation reinforcement material, is made by Zhoutong with its special know-how on composite technology based on the UHMWPE fibre. TFRP has higher modulus and strength, lighter weight, better durability compared to traditional GFRP (glass fiber based) and AFRP (aramid fiber based), and already widely used in the access network, especially the indoor optical cable.

## Specifications

- Type:  $\Phi 0.5\sim 2\text{mm}$  (customizable), without coating;
- Package: Wrapped in plastic reel; 25 km or 50 km in length per each reel, and can also be customized according to customer's requirements.
- This product shall not be spliced.

### Item

Appearance

Color

Outer Diameter (mm)

Non-circularity for coating (%)

Density (g/cm<sup>3</sup>)

Tensile Strength (Mpa)

Tensile Elastic modulus (Gpa)

Minimum bend radius (10D, 20 $\pm$ 5 $^{\circ}$ C)

Heat-resistant Bending Test

Cold -resistant Bending Test

### Specification

No defects harmful to use such as cracks, uneven spots, and contamination

Yellow

$D \pm 0.05$  ( standard D= 0.43, 0.5, 0.6)

$\leq 5$

0.9 ~ 1.0

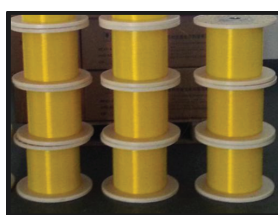
$\geq 1600$

$\geq 55$

No change

80 $^{\circ}$ C $\times$ 24hours, 30mm, no cracks observed

-40 $^{\circ}$ C  $\times$ 24hours, 30mm, no cracks observed



# Spec Sheet

# G-FRP

This specification applies to a G-FRP rod used for a tension member of optical cables. The G-FRP consists of glass fiber and resin.

## Specifications

- Type:  $\Phi 0.5 \sim 2\text{mm}$  (customizable);
- Package: Wrapped in plastic reel; 25 km or 50 km in length per each reel, and can also be customized according to customer's requirements.
- This product shall not be spliced.

### Item

Appearance

Color

Outer Diameter (mm)

Density (g/cm<sup>3</sup>)

Tensile Strength (Mpa)

Tensile Elastic modulus (Gpa)

Elongation at break (%)

Minimum bend radius

(40D, 20±5°C)

Heat-resistant Bending Test

(50D, 100±1°C, 120h)

Cold-resistant Bending Test

(50D, -40±1°C, 120h)

Torsion performance

### Specification

No defects harmful to use such as cracks, uneven spots, and contamination

Nature

$0.5 \pm 0.01$

$2.10 \pm 0.05$

$\geq 1100$

$\geq 59$

4

No burr, no crack, smooth surface and back to be flat after bending

No burr, no crack, smooth surface and back to be flat after bending

No burr, no crack, smooth surface and back to be flat after bending

No break

# Spec Sheet

# K-FRP

KFRP, also called as AFRP. This specification applies to a K-FRP rod used for a tension member of optical cables. The K-FRP consists of aramid fiber and resin.

## Specifications

- Type:  $\Phi 0.5\sim 2\text{mm}$  (customizable);
- Package: Wrapped in plastic reel; 25 km or 50 km in length per each reel, and can also be customized according to customer's requirements.
- This product shall not be spliced.

Item	Specification
Appearance	Smooth surface and uniform color.
Color	Nature
Outer Diameter (mm)	$0.5 \pm 0.01$
Density (g/cm <sup>3</sup> )	$2.10 \pm 0.05$
Tensile Strength (Mpa)	$\geq 1100$
Tensile Elastic modulus (Gpa)	$\geq 50$
Elongation at break (%)	4
Minimum bend radius (10D, $20 \pm 5^\circ\text{C}$ )	No change (No burr, no crack, smooth surface and back to be flat after bending)
Heat-resistant Bending Test (30D, $80 \pm 1^\circ\text{C}$ , 24h)	No change (No burr, no crack, smooth surface and back to be flat after bending)
Cold-resistant Bending Test (30D, $-40 \pm 1^\circ\text{C}$ , 24h)	No change (No burr, no crack, smooth surface and back to be flat after bending)
Torsion performance	No break

# Spec Sheet

## Q-FRP

QFRP is new developed FRP which made from glass fiber and resin, and it is different from general GFRP on performance in optical cable.

### Specifications

- Type:  $\Phi 0.5 \sim 2\text{mm}$  (customizable);
- Package: Wrapped in plastic reel; 25 km or 50 km in length per each reel, and can also be customized according to customer's requirements.
- This product shall not be spliced.

#### Item

Appearance  
Color  
Outer Diameter (mm)  
Roundness (%)  
Tensile Strength (Mpa)  
Tensile Elastic modulus (Gpa)  
Elongation at break (%)

#### Specification

Smooth surface and uniform color.  
Nature  
 $D \pm 0.05$   
< 5  
 $\geq 1200$   
 $\geq 50$   
< 4

Heat-resistant Bending Test  
( $80 \pm 1$  °C, 24h)

No crack, no break

Cold-resistant Bending Test  
( $80 \pm 1$  °C, 24h)

No crack, no break