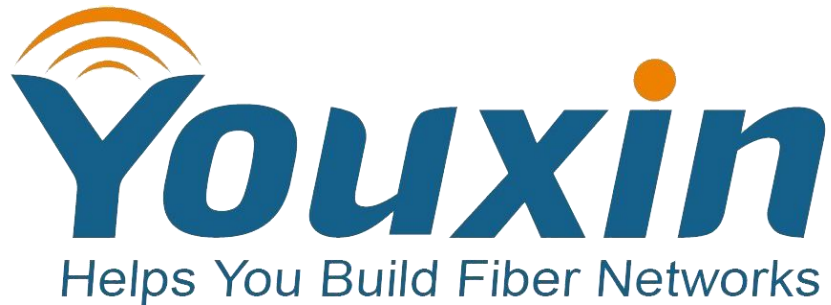


**Ningbo Youxin Optic-Electronic Technology Co.,LIMITED**



**TECHNICAL SPECIFICATIONS  
FOR GYXTC8Y CABLE**

## 1. Product Description

This specification covers the general requirements and performance of cable for GYXTC8Y, which FOC offered including optical characteristics, mechanical characteristics and geometrical characteristics and etc.

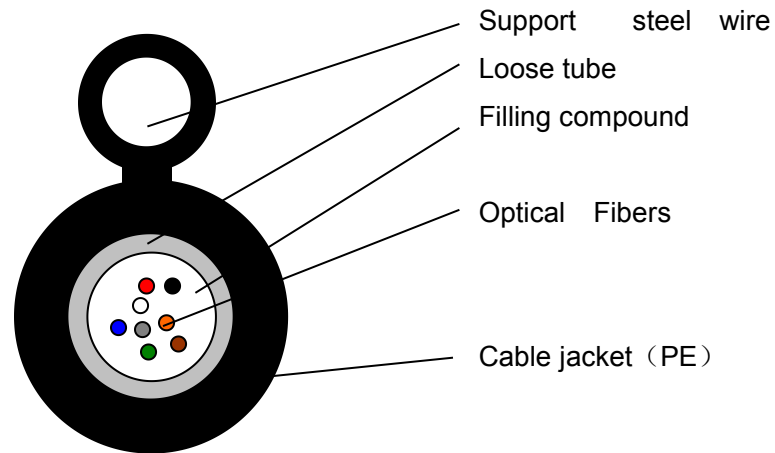
## 2. OPTICAL FIBER

### Optical fiber characteristics (FPC G.652 FIBER)

Category	Description		Specifications
			G.652
Optical Specifications	Attenuation	@1310nm	≤0.36dB/km
		@1550nm	≤0.22dB/km
	Attenuation vs. Wavelength	1285~1330 @1310nm	≤0.05 dB/km
		1525~1575 @1550nm	≤0.05 dB/km
		Zero Dispersion Wavelength	1300~1324nm
	Zero Dispersion Slope		≤0.092ps/(nm <sup>2</sup> .km)
	Dispersion	@1310nm	≤3.5 ps/nm.km
		@1550nm	≤18 ps/nm.km
	Cable Cutoff Wavelength( $\lambda_{cc}$ )		≤1260nm
Effective Group Index of Refraction	@1310nm	1.4675	
	@1550nm	1.4681	
Geometric Specifications	Mode Field Diameter	@1310nm	9.2±0.4μm
		@1550nm	10.4±0.5μm
	Cladding Diameter		125±1μm
	Cladding Non-Circularity		≤0.7%
	Coating Diameter		245±7μm
	Coating/Cladding Concentricity Error		≤12μm
Core/Cladding Concentricity Error		≤0.8μm	
Mechanical Specifications	Proof Test level		≥1.0%
	Fiber Curl Radius		≥4.0m
	Peak Coating Strip Force		1.3~8.9N

### 3. OPTICAL CABLE

#### 3.1 Construction of cable



**GYXTC8Y**

Item		Description
Fiber counts of cable		2~12
Loose tube	Material	PBT
	No. fiber per tube	2~12
	No. of tube	1
	Diameter(mm)	Approx.3.0
	Filling compound Material	Thixotropic jelly
Support wire	Material	Galvanized steel wire
	Diameter	Φ 1.2
Cable sheath Thickness	Material	Black PE
	Cable core	*Nom. 1.0mm
	Support wire	*Nom. 1.0mm
Approx. cable dia.(mm)		** Nom..5.1
Approx. overall(mm)		Approx.9.8

\* The nominal sheath thickness may have a tolerance with  $\pm 0.2\text{mm}$ .

\*\* The nominal diameter may have a tolerance with  $\pm 0.4\text{m}$

3.2 Fiber coding, The color coding of the optical fiber shall be in accordance with the table

No. of fiber	1	2	3	4	5	6
Color of fiber	Blue	Orange	Green	Brown	Grey	White
No. of fiber	7	8	9	10	11	12
Color of fiber	Red	Black	Yellow	Violet	Pink	Aqua

#### 4. TEST REQUIREMENTS

No	Item	Test standard	Method	Acceptance criteria
1	Tensile test	IEC-60794-1-E1	-Max. Tensile strength:600N -Sample length:50 meters -Time: 1minutes;	-Fiber strain at maximum Load: max. 0.33% -Attenuation increase $\leq$ 0.1dB
2	Crush test	IEC-60794-1-E3	-Load:200N -Time: 1 minutes -Length: 100mm	-No splits or cracks in the outer jacket; - No fiber break
3	Impact test	IEC-60794-1-E4	-Impact energy: 100g - Height:1 meter -Impact points: min.1 --Number of impacts: 5	-No splits or cracks in the outer jacket - No fiber break
5	Bending test	IEC-60794-1-E11	-Diameter of mandrel: 20×D -Number of turns/helix:10 -Number of cycles: 5	- No splits or cracks in the outer jacket - No fiber break
6	Temperature cycling test	IEC-60794-1-F1	-Temperature step: +20°C→0°C→+60°C→0°C→+60°C→+20°C -Time per each step: 12 hrs -Number of cycles: 2 cycles	-Attenuation variation for reference value(the attenuation to be measured before test at +20±3°C) $\leq$ 0.1dB/km,
7	Water penetration test	IEC-60794-1-F5	-Water height: 1m -Sample length:3m -Duration of test: 24hrs	-No water leakage at the end of the sample
8	Drip test	IEC-60794-1-E14	-Five 0.3m samples suspended vertically in a climate chamber, raised temperature to +70°C	-No filling compound shall drip from tubes after 24 hr

## **5. PACKING AND DRUM**

5.1 The cable is rounded on a non-returnable wooden drum. Both ends of cable are securely fastened to drum and sealed with a shrinkable cap to prevent ingress of moisture. The following information shall be marked on the outer sheath of the cable at an interval of about 1 meter.

- Cable type and number of optical fiber
- Manufacturer name
- Month and Year of Manufacture
- Cable length

The sequential number of the cable length shall be marked on the outer sheath of the cable at an interval of 1meter  $\pm$  1%.

5.2 Drum marking, Each side of every wooden drum shall be permanently marked in a minimum of 2.5~3 cm high lettering with following:

- Manufacture name and logo
- Cable length
- Cable type and number of fibers
- Roll way
- Gross and net weight

-End of Specification-