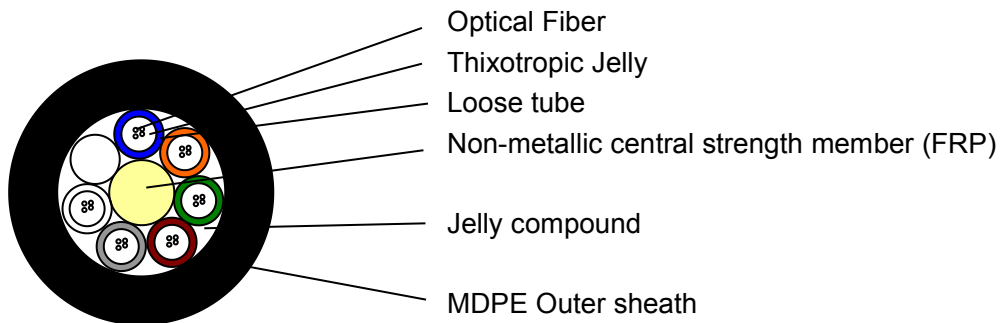


## GYFTY-24F

### Features

- ◇ Low dispersion and attenuation
- ◇ Proper design, precise control for fiber excess length and distinct stranding process render the cable excellent mechanical and environmental properties
- ◇ The armoring of corrugate steel tape make cable have nice properties of moisture resistance and crush resistance
- ◇ With small cable diameter, light cable weight, easily to lay
- ◇ Operating Temperature : -40~+60 °C

### Structure



Structure		Unit	Parameter
Fiber count		Fibers	4/8/12/24
Max. cores of per tube		--	6
Loose tube diameter		mm	Nom.Φ1.9
Element			7
Cable diameter		mm	Nom.10.5
sheath thickness		mm	Nom.2.0
Weight		Kg/km	Nom.94
Bending Radius	Dynamic		≥20×Cable Diameter
	Static		≥10×Cable Diameter
Operating temperature		°C	-40 --- +60

## GYFTY-24F

**Table 1** Fiber coding, The color coding of the optical fiber shall be in accordance

<b>No. of fiber</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
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	Turquoise
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	Turquoise

**Table 2** Identification of optical tube

<b>No. of fiber</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Color of fiber	Blue	Orange	Green	Brown	Grey	White

**Table 3** Make-up of cable, No. of fibers in each tube

No. of Fibers	No. of Tube		1	2	3	4	5	6	7	8
4	1	Tube color	Blue	F	F	F	F	F	F	
		No. of fiber	4							
8	2	Tube color	Blue	Orange	F	F	F	F	F	
		No. of fiber	4	4						
12	2	Tube color	Blue	Orange	F	F	F	F	F	
		No. of fiber	6	6						
24	4	Tube color	Blue	Orange	Green	Brown	F	F	F	
		No. of fiber	6	6	6	6				

**Note** "F" means the white filler

### Test requirements

No	Item	Test standard	Method	Acceptance criteria
1	Tensile test	IEC-60794-1-E1	-Max. Tensile strength:1500N -Sample length:50 meters -Time: 1minutes;	-Fiber strain at maximum Load: max. 0.33%

				-Attenuation increase $\leq 0.10$ dB
2	Crush test	IEC-60794-1-E3	-Load: 1000N -Time: 1 minutes -Length: 100mm	-No splits or cracks in the outer jacket; -Attenuation increase $< 0.10$ dB,
3	Impact test	IEC-60794-1-E4	-Impact energy: 450g - Height: 1 meter -Impact points: min. 1 -Number of impacts: 5	-No splits or cracks in the outer jacket -Attenuation increase $\leq 0.10$ dB
4	Repeated bending	IEC-60794-1-E6	-R=20 $\times$ cable outer diameter -1m cable length with 150N weight, 30 cycles	- No splits or cracks in the outer jacket -Attenuation increase $\leq 0.10$ dB
5	Torsion test	IEC-60794-1-E7	-1m cable length with 150N weight - $\pm 180$ degrees, 10 cycles	- No splits or cracks in the outer jacket -Attenuation increase $\leq 0.10$ B
6	Bending test	IEC-60794-1-E11	-Diameter of mandrel: 20 $\times$ D -Number of turns/helix: 10 -Number of cycles: 5	- No splits or cracks in the outer jacket - No fiber break
7	Temperature cycling test	IEC-60794-1-F1	-Temperature step: +20 $^{\circ}$ C $\rightarrow$ -40 $^{\circ}$ C $\rightarrow$ +60 $^{\circ}$ C $\rightarrow$ -40 $^{\circ}$ C $\rightarrow$ +60 $^{\circ}$ C $\rightarrow$ +20 $^{\circ}$ 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 $\pm$ 3 $^{\circ}$ C ) $\leq 0.05$ dB,
8	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
9	Drip test	IEC-60794-1-E14	-Five 0.3m samples suspended vertically in a climate chamber, raised temperature to +70 $^{\circ}$ C	-No filling compound shall drip from tubes after 24 hr

## Description

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

**Parameter**

Item	Description		Specifications
			G.652D
Optical specifications	Attenuation	@1310nm	≤0.35dB/km
		@1383nm	≤0.35dB/km
		@1550nm	≤0.22dB/km
		@1625nm	≤0.25dB/km
	Attenuation discontinuity		≤0.05 dB
	Attenuation vs. wavelength	@1285~1330nm	≤0.05 dB/km
		@1525~1575nm	≤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
	Polarization mode dispersion(PMD)		≤0.2ps/km <sup>1/2</sup>
	Cable cutoff wavelength(λ <sub>cc</sub> )		≤1260nm
Effective group index of refraction	@1310nm	1.4675	
	@1550nm	1.4681	
Geometric specifications	Mode field diameter	@1310nm	9.2±0.6μm
		@1550nm	10.4±0.8μm
	Cladding diameter		125±1μm
	Cladding non-circularity		≤1.0%
	Coating diameter		245±7μm
	Coating/cladding concentricity error		≤8μm
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

**Applications**

- ◇ FTTx network
- ◇ PON network
- ◇ HFC/CATV network
- ◇ Fiber optic communication

**Packing and drum**

1 The cable is wound 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

## GYFTY-24F

- 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%.

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