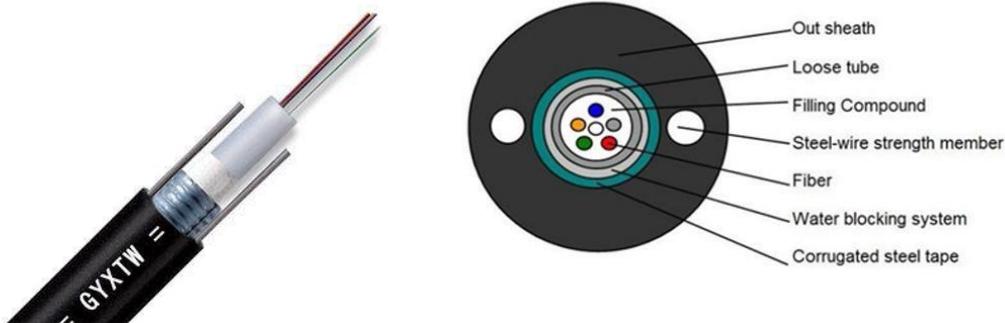


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## Unitube Light-armored Cable (GYXTW)

### 1、 Cable Drawing



### 2、 Description

The fibers, 250 $\mu$ m, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. The tube is wrapped with a layer of PSP longitudinally. Between the PSP and the loose tube water-blocking material is applied to keep the cable compact and watertight. Two parallel steel wires are placed at the two sides of the steel tape. The cable is completed with a polyethylene (PE) sheath.

### 3、 Features

- Good mechanical and temperature performance
- High strength loose tube that is hydrolysis resistant
- Special tube filling compound ensure a critical protection of fiber
- Crush resistance and flexibility
- Two parallel steel wires ensure tensile strength
- Small diameter, light weight and friendly installation

### 4、 Application

- Suitable for ducts & aerial fiber optic cable
- Local area network system
- Long distance communication system
- Subscriber network

## 5、 Specification

### 1) Fiber Allocation Scheme

Fiber number	Tube number	Fiber per tube	Fiber type
2-24	1	2-24 F/Tube	OS1,OS2,OM1,OM2,OM3,OM4

### 2) construction details

Items		Description
Number of fiber		2-24 cores
Moisture Barrier		Water blocking system
Steel wire	Number	2
	diameter	0.8 mm
Loose tube	material	PBT
	diameter	Φ2.2mm(outer/inner)
Tube-filling	material	Tube filling compound
Outer sheath	material	PE,LSZH( can be required)
	color	Black (can be required)

### 3) Standard color of fiber and tube

The color code of the tubes and the individual fibers, shall be in accordance with the table as below:

Standard Colour Identification						
No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Slate	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

Color 13~24 will be marked with a black tracer. For black color no need marked black tracer, will use nature color instead.

Note: The color can be required by customers.

**4) Cable Mechanical characteristic**

Items		Cable diameter	Weight
2 cores to 24 cores		8.0±0.3mm	65±10kg/km
Installation Temperature range		-15--+60°C	
Operation and transport temperature		-40--+70°C	
Min Bending Radius(mm)	Long term	10D	
	short term	20D	
Allowable Tensile Strength(N)	Long term	600	
	short term	1500	
Crush Load (N/100mm)	Long term	300	
	short term	1000	

**5) Requirement for Order**

- (1) Fiber sort: Single mode:G652,G655,G657, Multi mode:OM1,OsM2,OM3,OM4.
- (2) Fiber brand: YOFC, Corning, Fiberhome,Fujikura,OFS etc.
- (3) The fiber and tube color: according to stranded color, can be required.
- (4) The cable Size: shall be in accordance with the table, can be required.
- (5) Length of cable: generally is 2KM, can be required.
- (6) Other requirement: can be negotiated.

**6) Fiber Characteristic**

Fiber Style		Unit	SM	MM	MM
			9/125	50/125	62.5/125
Condition		nm	1310/1550	850/1300	850/1300
Attenuation		dB/km	≤0.34/0.20	≤3.0/1.0	≤3.0/1.0
Dispersion	1310nm	Ps/(nm*km)	≤18	.....	.....

	1550nm	Ps/(nm*km)	$\leq 22$	.....	.....
Bandwidth	850nm	MHZ. KM	.....	$\geq 400$	$\geq 160$
	1300nm	MHZ. KM	.....	$\geq 800$	$\geq 500$
Zero dispersion wavelength		nm	$\geq 1302,$ $\leq 1322$	.....	.....
Zero dispersion slope		nm	$\leq 0.091$	.....	.....
PMD Maximum Individual Fiber		Ps/km	$\leq 0.2$	.....	.....
PMD Design Link Value		Ps(nm <sup>2</sup> *km)	$\leq 0.08$	.....	.....
Fiber cutoff wavelength $\lambda_c$		nm	$\geq 1180,$ $\leq 1330$	.....	.....
Cable cutoff wavelength $\lambda_{cc}$		nm	$\leq 1260$	.....	.....
MFD	1310nm	um	$9.2 \pm 0.4$	.....	.....
	1550nm	um	$10.4 \pm 0.8$	.....	.....
Numerical Aperture(NA)			.....	$0.200 \pm$ $0.015$	$0.275 \pm$ $0.015$
Step(mean of bidirectional measurement)		dB	$\leq 0.05$	$\leq 0.10$	$\leq 0.10$
Irregularities over fiber length and point discontinuity		dB	$\leq 0.05$	$\leq 0.10$	$\leq 0.10$
Difference backscatter coefficient		dB/km	$\leq 0.03$	$\leq 0.08$	$\leq 0.10$
Attenuation uniformity		dB/km	$\leq 0.01$	.....	.....
Core diameter		um	.....	$50 \pm 1.0$	$62.5 \pm 2.5$
Cladding diameter		um	$125.0 \pm 0.1$	$125.0 \pm 0.1$	$125.0 \pm 0.1$
Cladding non-circularity		%	$\leq 1.0$	$\leq 1.0$	$\leq 1.0$
Coating diameter		um	$242 \pm 7$	$242 \pm 7$	$242 \pm 7$
Coating/chaffinch concentricity error		um	$\leq 12.0$	$\leq 12.0$	$\leq 12.0$

Coating non circularity	%	≤6.0	≤6.0	≤6.0
Core/cladding concentricity error	um	≤0.6	≤1.5	≤1.5
Curl(radius)	um	≤4	.....	.....

## 6、 Cable marking and cable reel marking

### 6.1 Cable marking

The cable sheath shall be marked with white characters at intervals of one meter with following information:

- (1) Purchaser' s name
- (2) Cable type
- (3) Fiber type and counts
- (4) Year of manufacture
- (5) Length marking

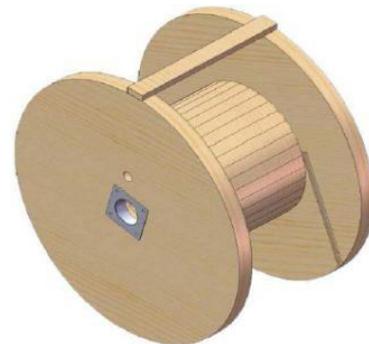
**Notice: cable mark is available if requested by customer.**

### 6.2 Cable reel

Details given below shall be marked with a weather materials on both outer sides of the reel flange :

- (1) Cable type and fiber counts
- (2) Length of cable in meters
- (3) Year of manufacture

**Notice: shipping mark is available if requested by customer.**



## 7 、 Packing Informations

- (1) Packing material: Wooden drum
- (2) Cable end protect material: waterproof-cap
- (3) Packing length: standard length of cable shall be 2 km. Other cable length is also available if required by customer

## 8、 Our certificates

- (1) ISO9002
- (2) SGS,
- (3) ROHS
- (4) REACH

## 9、 Testing Lab

No	Device name	No	Device name
1	Optical time domain reflectometer (OTDR)	8	GNZV Cable Torsion Testing Machine
2	Fiber Polarization Mode Dispersion	9	GQNV Cable Flexing Testing Machine
3	Fiber Dispersion ,Strain Tester	10	GJRV Cable Winding Testing Machine
4	High Low Temperature Test Chamber	11	GZDV Cable Vibration Testing Machine
5	Cable Impact Testing Machine	12	Cable Water Penetration Test
6	Cable Squash Tensile Testing Machine	13	Fusion Splicer
7	GWQV Cable Bending Tester	14	Cable Water Penetration Test Rig

## Fiber Optic Cable Mechanical Performance Testing Laboratory

- (1) Main Testing Type: Precision Test and Mechanical Test.
- (2) Precision Testing Machine: EXFO OTDR, EG&G PMD-440,CD-400.
- (3) Mechanical Performance Testing : Temperature, Impact, Tensile, Bending, Torsion,
- (4) Flexing, Winding, Vibration, Water Penetration, Fusion Splicer, Water Penetration.

## 10、 Our advantages

- (1) Professional cable manufacturer
- (2) About 10 years experiences in cable industry
- (3) MOQ just 1Km
- (4) ISO, UL , ROSH,REACH...certifications
- (5) Can be customized production of fiber optic cable.

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