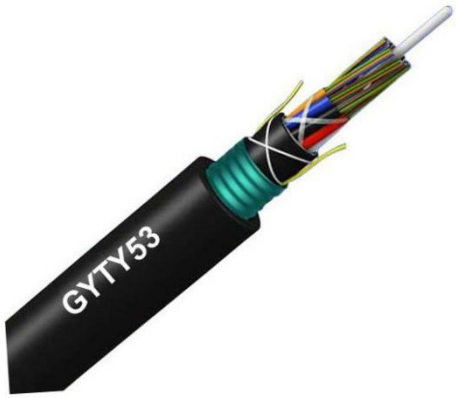
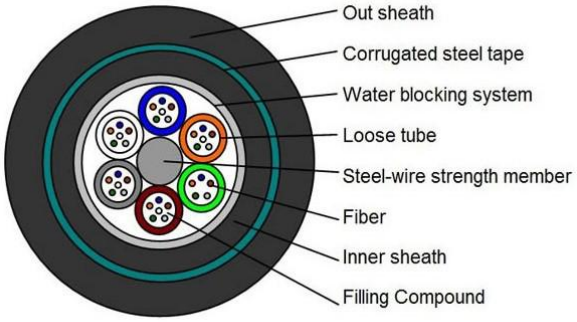
Stranded Loose Tube Armored Cable(GYTY53)

1、Cable Drawing





2、Description

The fibers, 250μm, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. A steel wire, sometimes sheathed with polyethylene (PE) for cable with high fiber count, locates in the center of core as a metallic strength member. Tubes (and fillers) are stranded around the strength member into a compact and circular cable core. The cable core is filled with the filling compound to protect it from water ingress, over which a thin PE inner sheath is applied. After the PSP is longitudinally applied over the inner sheath, the cable is completed with a PE outer 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
- The following measures are taken to ensure the cable watertight:

1) Steel wire used as the central strength member
2) Loose tube filling compound
3) 100% cable core filling

4) PSP enhancing moisture-proof

5) Water-blocking material

4、Application

- Adopted to outdoor distribution
- Suitable for aerial, pipeline laying method
- Long distance and local area network communication

5、Specification

1) Fiber Allocation Scheme

Fiber number	Tube number	Fiber per tube	Fiber type
2-144	1-12	12 F/Tube	OS1,OS2,OM1,OM2,OM3,OM4

2) Cable construction details

Items		Description
Number of fiber		2-144cores
Moisture Barrier		Water blocking system
Central strength member	Material	Steel wire/FRP
	size	1.4mm
Loose tube	material	PBT
	diameter	Φ2.2(outer/inner)
Tube-filling	material	Tube filling compound
Outer armored	Material	Aluminium tape/Corrugated steel tape
Outer sheath	material	PE/HDPE
	thickness	2.0±0.2mm
Outer sheath	material	PE/HDPE
	thickness	1.70±0.2mm

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 core to 60core		12.0±0.2mm	150±10kg/km
62 core to 72core		12.5±0.5mm	210±10kg/km
74 core to 96core		14.1±0.5mm	230±10kg/km
98 core to 144core		16.5±0.5mm	250±10kg/km
Installation Temperature range		-15--+60℃	
Operation and transport temperature		-40-+70℃	
Min Bending Radius(mm)	Long term	10D	
	short term	20D	
Allowable Tensile Strength(N)	Long term	3000	
	short term	4000	
Crush Load (N/100mm)	Long term	1000	
	short term	3000	

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) Sheath material: PE,LSZH(can be required).

(4) Sheath color: Black ,can be required.

(5) The fiber and tube color: according to stranded color, can be required.

(6) The cable Size: shall be in accordance with the table, can be required.

(7) Length of cable: generally is 2KM, can be required.

(8) Other requirement: can be negotiated.

6) Fiber Characteristic

Fiber Style		Unit	SM G652D	MM 50/125	MM 62.5/125
Condition		nm	1310/1550	850/1300	850/1300
Attenuation		dB/km	≤0.34/0.22	≤3.0/1.0	≤3.0/1.0
Dispersion	1310nm	Ps/(nm*km)	≤18	.....	.....
	1550nm	Ps/(nm*km)	≤22	.....	.....
Bandwidth	850nm	MHZ. KM	.....	≧400	≧160
	1300nm	MHZ. KM	.....	≧800	≧500
Zero dispersion wavelength		nm	≧1302, ≤1322	.....	.....
Zero dispersion slope		nm	≤0.091	.....	.....
PMD Maximum Individual Fiber		Ps/km	≤0.2	.....	.....
PMD Design Link Value		Ps(nm2*km)	≤0.08	.....	.....
Fiber cutoff wavelength λc		nm	≧1180, ≤1330	.....	.....
Cable cutoff wavelength λcc		nm	≤1260	.....	.....
MFD	1310nm	um	9.2±0.4	.....	.....
	1550nm	um	10.4±0.8	.....	.....

Numerical Aperture(NA)		.....	0.200± 0.015	0.275± 0.015
Step(mean of bidirectional measurement)	dB	≤0.05	≤0.10	≤0.10
Irregularities over fiber length and point discontinuity	dB	≤0.05	≤0.10	≤0.10
Difference backscatter coefficient	dB/km	≤0.03	≤0.08	≤0.10
Attenuation uniformity	dB/km	≤0.01	.....	.....
Core diameter	um	.....	50±1.0	62.5±2.5
Cladding diameter	um	125.0±0.1	125.0±0.1	125.0±0.1
Cladding non-circularity	%	≤1.0	≤1.0	≤1.0
Coating diameter	um	242±7	242±7	242±7
Coating/chaffinch concentrically error	um	≤12.0	≤12.0	≤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.

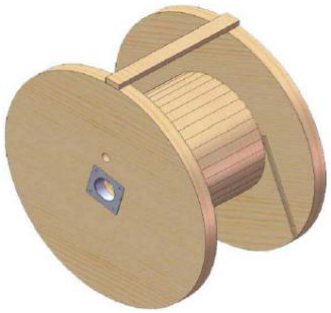
6.2 Cable reel

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) 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, ROHS

(3) ULE329066

(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, 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