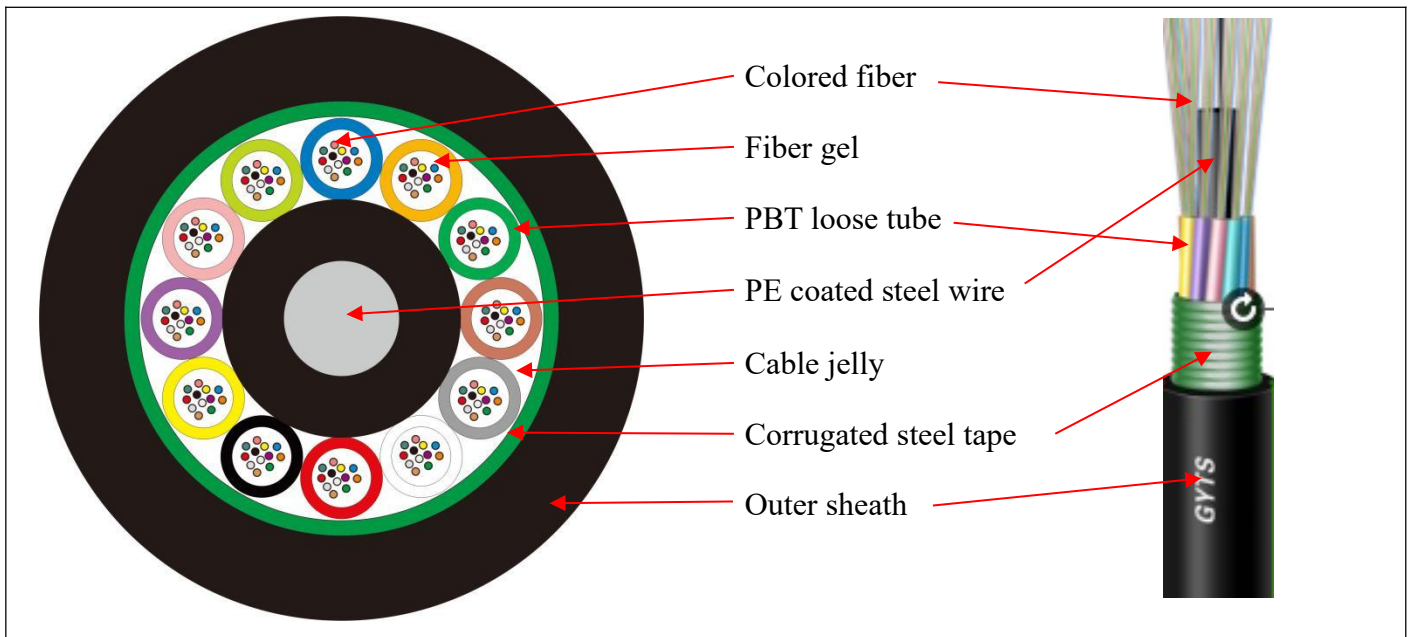


Armored Fiber Optical Cable GYTS 144 Cores

1. Cable Structure :



2. Construction:

1. Colored fiber

Coated outside diameter: $125.0 \pm 0.1 \mu\text{m}$

Optical fiber diameter: $242 \pm 7 \mu\text{m}$

UV color fiber: Standard chromatogram



2. Fiber gel

3. PBT loose tube

4. PE coated steel wire

5. Corrugated steel tape

6. Black PE outer sheath $14.0 \pm 0.3 \text{mm}$

3. Features

- ★ Excellent 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
- ★ Single steel wire center reinforcing member
- ★ Easy to installation and operation.

4.Application

- ★ Long distance and Local Area Network (LAN) communication.
- ★ Suitable for ducts fiber optic cabling
- ★ Subscriber network

5.Specification

Parameters of fiber

Optical fiber type	Unit	SM G652D	SM G657A1	MM 50/125	MM 62.5/125	MM OM4
Waveband	nm	1310/1550	1310/1550	850/1300	850/1300	850/1300
Attenuation	dB/km	0.36/0.24	0.36/0.24	3.5/1.5	3.5/1.5	3.5/1.5

Characteristics	Conditions	Specified values	Units
Optical Characteristics			
Attenuation	1310nm	≤0.36	[dB/km]
	1383nm(after H-aging)	≤0.36	[dB/km]
	1550nm	≤0.22	[dB/km]
	1625nm	≤0.23	[dB/km]
Zero Dispersion Wavelength)		1300-1324	[nm]
Zero Dispersion Slope(S _c)		≤0.092	[ps/(nm ² -km)]
Chromatic dispersion @1310nm @1550nm		≤ 3.5 ps/nm·km ≤ 18 ps/nm·km	
Cable Cutoff Wavelength(λ_{cc})		≤1260	[nm]
Macro bending Loss (100 turns; Φ 50 mm) @1550 nm (100 turns; Φ 50 mm) @1625 nm		≤ 0.05 dB ≤ 0.10 dB	
Mode Field Diameter @1310 nm		9.2±0.4 μ m	
Dimensional Specifications			
Cladding Diameter		125.0±1	[μ m]
Cladding Non-Circularity		≤1.0	[%]
Core-Cladding Concentricity Error		≤0.6	[μ m]
Proof stress		≥0.69	[G]



Dimension and Properties		
Physical	Fiber type	48 G652D
	PBT loose tube	1.9±0.1mm
	Steel wire	5.6(2.5)±0.1mm
	Cable OD	14.0±0.4mm
	Cable weight	220±3kg/km
	Operation temperature range	-20 deg C to + 60 deg C
	Installation temperature range	-5 deg C to + 50 deg C
	Transport and storage temperature range	-20 deg C to + 60 deg C
Mechanical	Max. tensile load	1500N
	Crush resistance	1000 N/10cm
	Minimal installation bending radius	20 x OD
	Minimal operation bending radius	10 x OD

6. Product parameters

Performance	Long-term	Short-term
Max. Tension (N)	600	1500
Max. Crushing Resistance(N/100mm ²)	300	1000
Min. Bending Radius	20D (Dynamic)	10D (Static)
Storage and operating temperature	-40°C — + 70°C	

7. Requirement for Order

- (1) Fiber type: Single mode:G652,G655,G657, Multi mode:OM1,OM2,OM3,OM4.
- (2) Fiber brand: YOFC, Corning, Fiberhome,Fujikura,OFS etc.
- (3) The fiber and tube color: according to stranded color, can be customized.
- (4) The cable Size: shall be in accordance with the cable, can be customized.
- (5) Length of cable: generally is 2KM/Drum, can be customized.
- (6) Cable printing:standard printing or can be customized.
- (7) Other requirement: can be negotiated.

8. 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 Fiber number
- (4) Year of manufacture
- (5) Length marking
- (6) Can do Customized cable printing

9.Packing Informations

- (1) Packing material: Wooden drum
- (2) Cable end protect material: waterproof-cap
- (3) Packing length: standard length of cable is 2km/drum. Customized packing length is available
- (4) Shipping mark is available if requested by customer



- 1. No damage on the surface: no trachoma.
- 2. Wooden tray packaging: wood whole seal packaging
- 3. Size of Wooden drum: 1100*500*730mm
- 4. Segment length: no less than 2000M. The estimated weight of 2 km/drum is 495kg. The segment length of each tray of the same batch shall be similar as much as possible. Other lengths can be agreed upon through consultation.
- 5. Test Report: It includes optical cable inspection number, optical cable type, core number, optical fiber type, length, etc

10.Our certificates

- (1) ISO9001 (2) SGS (3) ROHS (4) REACH



11. TEST REQUIREMENTS

The cable is in accordance with applicable standard of cable and requirement of customer. The following test items are carried out according to corresponding reference.

1. Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample length	No less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

2. Crush/Compression Test

Test Standard	IEC 60794-1-2 E3
Load	Crush load
Duration time	1 minute
Test number	3
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

3. Impact Resistance Test

Test Standard	IEC 60794-1-2 E4
Impact energy	3J
Radius	300mm
Number of impacts	One in 3 different places spaced not less than 500 mm apart
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

4. Torsion/Twist Test

Test Standard	IEC 60794-1-2 E7
Sample length	2m
Angles	± 180 degree
cycles	10
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements



5. Bend Test

Test Standard	IEC 60794-1-2 E11
Mandrel diameter	20 X diameter of cable
Turn number	4
Number of cycles	3
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

6. Repeated Bending Test

Test Standard	IEC 60794-1-2 E6
Bending radius	20 X diameter of cable
Cycles	25 cycles
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

7. Temperature cycling Test

Test Standard	IEC 60794-1-2 F1
Temperature step	+20°C → -40°C → +70°C → -40°C → +70°C → +20°C
Time per each step	12 hrs
Cycles	2
Test results	Attenuation variation for reference value (the attenuation to be measured before test at +20±3°C) ≤ 0.15 dB/km

8. Water penetration Test

Test Standard	IEC 60794-1-2 F5
Height of water column	1m
Sample length	3m
Test time	24 hrs
Test result	No water leakage from the opposite of the sample core