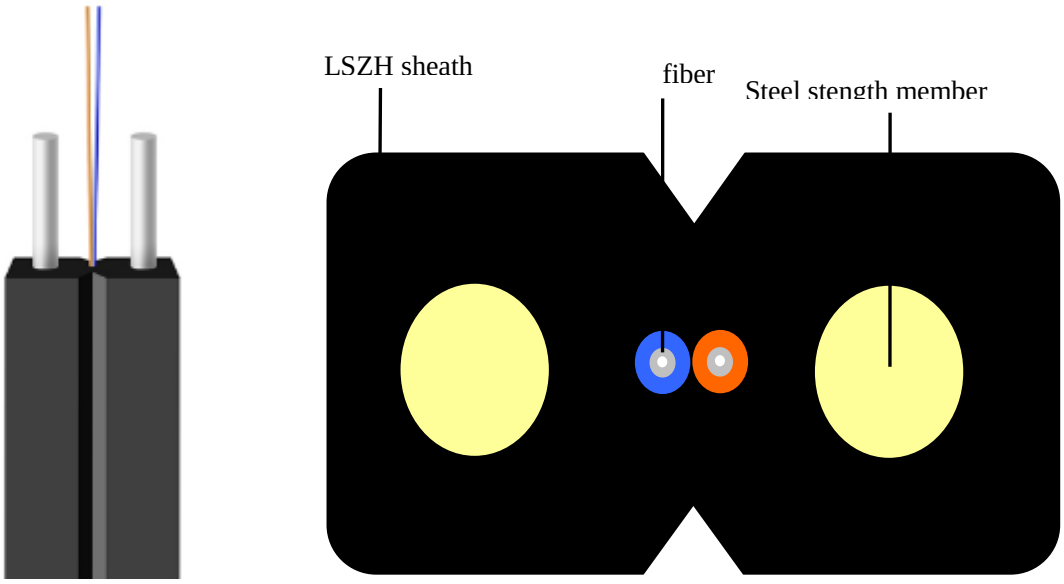
Fiber to the Home Cable(1,2,4core FTTH)

Specification

1. *Cable Description*

FTTH Cable directly connected to their homes, their bandwidth, wavelength and transmission technology type are not restricted. The optical fiber(1,2,4 core) unit positioned in the center. Two parallel strength member are placed at the two sides , then, the cable is completed with a black LSZH sheath.

2. *Cable Drawing*



<Cross-sectional Drawing of Cable>

Note : Structure drawing just for reference, please check the following details.

3. *Application*

Adopted to indoor distribution.
As pigtail of communication equipment
Suitable for communication equipment
Can be installed conveniently

4. ***Characteristics***

Weight, low cost, and practicability.
Suitable for limited space field of the branch, indoor series
Lead to facilitate construction operations;
Jacket use low smoke, halogen-free flame-retardant materials.
Prevent lightning and strong electric environment;
Steel wire strengthen the component materials

5. ***Features:***

Cable construction details

Items		Description
Number of fiber		1,2,4 cores
Fiber type		G657A1
Strength member	material	Galvanized steel wire/FRP
	diameter	2*(0.5~0.8)mm
Outer sheath	material	LSZH
	diameter	1.8±0.2mm
Cable size (Height * width)		3.0(±0.1) mm ×2.0 (±0.2)mm
Cable sheath thickness		Max. 0.8mm/Min. 0.4mm
Cable weight		8.5 KG±1KG

6. ***Standard color of fiber and tube***

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

Standard Color Identification				
No.	1	2	3	4
Color	Blue	Orange	Green	Brown

Out sheath is black.

7. ***Cable Mechanical characteristic***

Items		Description
Installation Temperature range		-20--+60℃
Operation and transport temperature		-40-+70℃
Min Bending Radius(mm)	Long term	10D
	short term	20D
Allowable Tensile Strength(N)	Long term	40
	short term	80
Crush Load (N/100mm)	Long term	500
	short term	1000

8. ***Requirement for Order:***

1.Fiber sort: Single mode G652, G657, Multi mode 50/125,62.5/125,OM3,OM4.
2.Fiber brand: YOFC, Corning, SEI etc.
3.Sheath material: LSZH
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 1KM, can be required.
8.Other requirement:can be negotiated.

9. ***Fiber characteristic***

Fiber style		Unit	SM G652D	SM G657A1	SM G657A2
condition		nm	1310/1550	1310/1550	1310/1550
attenuation		dB/km	≤0.36/0.23	≤3.5/0.21	≤3.5/0.21
Dispersion	1310nm	Ps/(nm*km)	≤18	≤18	≤18
	1550nm	Ps/(nm*km)	≤22	≤22	≤22
Zero dispersion wavelength		nm	1312±10	1312±10	1300-1324
Zero dispersion slope		ps/(nm²×Km)	≤0.091	≤0.090	≤0.092
PMD Maximum Individual Fiber		[ps/√km]	≤0.2	≤0.2	≤0.2
PMD Design Link Value		ps/(nm²×Km)	≤0.08	≤0.08	≤0.08
Fiber cutoff wavelength λc		nm	≧1180,≤1330	≧1180,≤1330	≧1180,≤1330
Cable cutoff wavelength λcc		nm	≤1260	.....	.....
MFD	1310nm	um	9.2±0.4	9.0±0.4	9.8±0.4
	1550nm	um	10.4±0.8	10.1±0.5	9.8±0.5
Step(mean of bidirectional measurement)		dB	≤0.05	≤0.05	≤0.05
Irregularities over fiber length and point discontinuity		dB	≤0.05	≤0.05	≤0.05
Difference backscatter coefficient		dB/km	≤0.03	≤0.03	≤0.03
Attenuation uniformity		dB/km	≤0.01	≤0.01	≤0.01
Cladding diameter		um	125.0±0.1	124.8±0.1	124.8±0.1
Cladding non-circularity		%	≤1.0	≤0.7	≤0.7
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	≤0.5	≤0.5
Curl(radius)		um	≥4	≥4	≥4
Fiber style		Unit	SM G652D	SM G657A1	SM G657A2
condition		nm	1310/1550	1310/1550	1310/1550
attenuation		dB/km	≤0.36/0.23	≤3.5/0.21	≤3.5/0.21
Dispersion	1310nm	Ps/(nm*km)	≤18	≤18	≤18
	1550nm	Ps/(nm*km)	≤22	≤22	≤22
Zero dispersion wavelength		nm	1312±10	1312±10	1300-1324
Zero dispersion slope		ps/(nm²×Km)	≤0.091	≤0.090	≤0.092
PMD Maximum Individual Fiber		[ps/√km]	≤0.2	≤0.2	≤0.2
PMD Design Link Value		ps/(nm²×Km)	≤0.08	≤0.08	≤0.08
Fiber cutoff wavelength λc		nm	≧1180,≤1330	≧1180,≤1330	≧1180,≤1330
Cable cutoff wavelength λcc		nm	≤1260	.....	.....
MFD	1310nm	um	9.2±0.4	9.0±0.4	9.8±0.4
	1550nm	um	10.4±0.8	10.1±0.5	9.8±0.5
Step(mean of bidirectional measurement)		dB	≤0.05	≤0.05	≤0.05
Irregularities over fiber length and point discontinuity		dB	≤0.05	≤0.05	≤0.05
Difference backscatter coefficient		dB/km	≤0.03	≤0.03	≤0.03
Attenuation uniformity		dB/km	≤0.01	≤0.01	≤0.01

G657A1 fiber Environmental Characteristics (1310nm, 1500nm, &1625nm)			
Temperature dependence Induced attenuation at	-60℃ to +85℃	≤0.05	[db/Km]
Temperature-humidity cycling Induced attenuation at	-10℃ to +85℃, 98% RH	≤0.05	[db/Km]
Watersoak dependence Induced attenuation at	23℃ for 30 days	≤0.05	[db/Km]
Damp heat dependence Induced attenuation at	85℃ and 85% RH for 30 days	≤0.05	[db/Km]
Dry heat aging at	85℃	≤0.05	[db/Km]
Mechanical Specification			
Proof test	off line	≧9.0	[N]
		≧1.0	[%]
		≧100	[kpsi]
Macro-bend induced attenuation			
100 turns around a mandrel of 50 mm diameter			
10 turns around a mandrel of 30 mm diameter	1550nm	≤0.1	[dB]
10 turns around a mandrel of 30 mm diameter	1625nm	≤0.3	[dB]
1 turn around a mandrel of 20 mm diameter	1550nm	≤0.1	[dB]
1 turn around a mandrel of 20 mm diameter	1625nm	≤0.5	[dB]
Coating strip force	typical average force	1.7	[N]
	peak force	≧1.3 ≤8.9	[N]
Dynamic stress corrosion susceptibility parameter (typical)		≧20	

10. Cable marking and cable reel marking

Cable marking

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

1. Purchaser's name
2. Fiber type and counts
3. Cable type
4. Name of manufacturer
5. Country of origin
6. Length marking

11. Packing Informations

1. Packing material: Wooden drum+ Carton box
2. Packing length: standard length of cable shall be 1 km. Other cable length is also available if required by customer

12. *Our certificates :*

1) ISO9002
2) SGS, ROHS
3) ULE329066
4) REACH

13. *Testing Lab:*

Fiber Optic Cable Mechanical Performance Testing Laboratory

1. Main Testing Type: Precision Test and Mechanical Test.
2. Precision Testing Machine: EXFO OTDR
3. Mechanical Performance Testing : Temperature, Impact, Tensile, Bending, Torsion, Flexing, Winding, Vibration, Water Penetration, Fusion Splicer, Water Penetration.

14. *Our advantages:*

1. Professional cable manufacturer.
2. About 10 years experiences in cable industry.
3. MOQ just 1Km.
4. ISO, UL , ROSH...certifications.
5. Can be customized production of fiber optic cable.
6. Independent Lab with full set of testing machines.