



In/Out tight buffer Optical Cable Specification

1. Cable Description

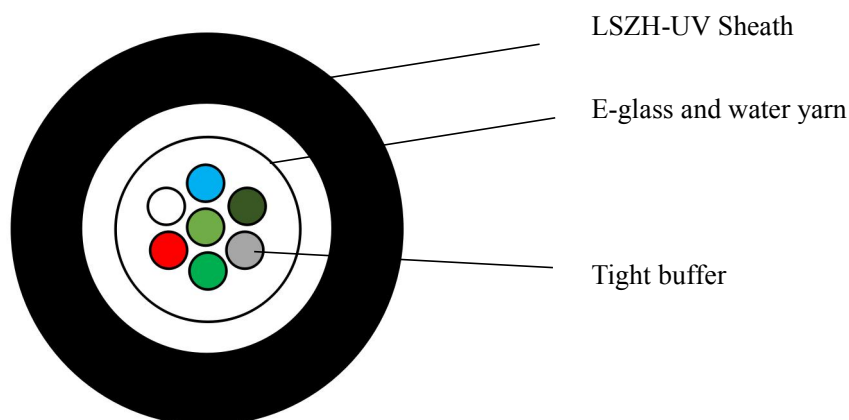
In/Out Optical Cable use 2~48 core 900µm tight buffer fiber as optical communication medium.

The tight buffer fiber wrapped with a layer of e-glass yarn as strength member ,then completed with a layer of LSZH material as out jacket.

2. Cable Drawing



<Cross-sectional Drawing of Cable>



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

3. Application

- ❖ Used in pigtailed and patch cords
- ❖ Used as interconnect lines of equipments, and used in optical connections in optical communication rooms and optical distribution frames



- ❖ Used in indoor and outdoor cabling, especially used as distribution cable

4. Characteristics :

- ❖ Good mechanical and environmental characteristics
- ❖ Flame retardant characteristics meet the requirements of relevant standards
- ❖ The mechanical characteristics of jacked meet the requirements of relevant standards
- ❖ Soft,flexible,easy to lay and splice,and with big capacity data transmission
- ❖ Meet various requirements of market and clients.

5. Cable construction details :

Technical Parameters:										
Cable Count	Outside Diameter	Loose tube Diameter	Weight	Minimum allowable Tensile Strength (N)		minimum allowable Crush Load (N/100mm)		Minimum Bending Radius (MM)		Storage temperature
	(MM)	(MM)	(KG)	short term	long term	short term	long term	short term	long term	(°C)
02	3.0	0.9	15.00	600	200	1000	200	20D	10D	-40+60
04	5.0	0.9	22.00	600	200	1000	200	20D	10D	-40+60
06	5.0	0.9	23.00	600	200	1000	200	20D	10D	-40+60
08	5.5	0.9	28.00	600	200	1000	200	20D	10D	-40+60
12	6.0	0.9	38.00	600	200	1000	200	20D	10D	-40+60
16	7.2	0.9	42.00	600	200	1000	200	20D	10D	-40+60
16	8.0	0.9	48.00	600	200	1000	200	20D	10D	-40+60
24	8.3	0.9	58.00	600	200	1000	200	20D	10D	-40+60
36	9.5	0.9	68.00	600	200	1000	200	20D	10D	-40+60
48	10.0	0.9	96.00	600	200	1000	200	20D	10D	-40+60

6. Standard color of tight buffer

The color of the tight buffer, 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		Yellow	Violet	Pink	Aqua
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7. Cable Mechanical characteristic

Fiber style	Unit	SM G652D	MM 50/125	MM 62.5/125
condition	nm	1310/1550	850/1300	850/1300
attenuation	dB/km	≤0.36/0.23	≤3.0/1.0	≤3.0/1.0
Dispersion	1310nm	Ps/(nm*km)	≤18	.....
	1550nm	Ps/(nm*km)	≤22	.....
Bandwidth	850nm	MHZ. KM	.....	≥400
	1300nm	MHZ. KM	.....	≥800
Zero dispersion wavelength	nm	≥1302, ≤1322	.....	.....
Zero dispersion slope	nm	≤0.091	.....	.....
PMD Maximum Individual Fiber		≤0.2	.....	.....
PMD Design Link Value	Ps(nm ² *km)	≤0.08	.....	.....
Fiber cutoff wavelength λ _c	nm	≥1180,≤1330	.....	.....
Cable cutoff wavelength λ _{cc}	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 concentricity 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	.....	.....

8. Requirement for Order:



- 1.Fiber sort: Single mode G652,G655,G657, Multi mode 50/125,62.5/125,OM3,OM4.
- 2.Fiber brand: YOFC, Corning, Fiberhome Fujikura, OFS etc.
- 3.Sheath material: PE,LSZH, PVC(can be required).
- 4.Sheath color: Orange, 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.

9. 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

10. Packing Informations

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

11. Our certificates :

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

12. 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.

13. 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.
6. Independent Lab with full set of testing machines.
7. Supply to Thai telecom, Doha airport, Doha telecom, Dubai telecom, Dubai telecom ,Slovenia telecom and Yemen telecom and other big projects.

No of Part:

ERO-BK-INOUT-XX-XX-LSZH-Number of Meters (500m, 1Km, 1.5Km or 2km)

XX-No of Fiber (06, 12, 24)

XX- Type of Fiber (OM1-OM2-OM3-OM4-SM-SMA1-SMA2)