



INDOOR, DISTRIBUTION, FR-LSZH, FIBER OPTIC CABLE

1. APPLICATION

This specification covers the general requirements for fiber optic telecommunication cables used for campus backbone (inter-building), building backbone (intra-building), indoor installation. LINK fiber optic cable support application such as 40/100Gbps Ethernet, IEEE802.3ae,10G Ethernet, IEEE802.3z,Gigabit Ethernet, Fast Ethernet, Ethernet,100BASE-F, 52/155/622Mbps and 1.2Gbps ATM, FDDI, Fiber channel and others.

LINK INDOOR, Distribution, LSZH, fiber optic cable , 900µm tight-buffered optical fibers surrounded by aramid strength member with a flame-retardant LSZH outer jacket.

LINK fiber optic cable in accordance with

- | | |
|----------------------------------|-----------------------------|
| ANSI/TIA-568-C.3 | ISO/IEC 11801:2011 (Ed.2.2) |
| ANSI/TIA/EIA-568-B.3 | ISO/IEC 11801:2002 |
| ANSI/ICEA 596 | IEC 60332-1, IEC 60332-3 |
| Telcordia (Bellcore) GR-409-CORE | IEC 61034-2, IEC 60754-2 |
| ITU-T G.652D (Singlemode) | IEC 60793, IEC 60794-1-2 |
| ITU-T G.651 (Multimode) | EN 50173-1 |
| RoHS Compliant | |

2. ORDER INFORMATION

INDOOR, DISTRIBUTION, FR-LSZH, FIBER OPTIC CABLE

Descriptions	OS2, SM 9/125 µm	OM1, MM 62.5/125 µm	OM2, MM 50/125 µm	OM3, MM 50/125 µm	OM4, MM 50/125 µm
4 core	UFC9204LSZH	UFC6204LSZH	UFC5204LSZH	UFC4204	UFC3204
6 Core	UFC9206LSZH	UFC6206LSZH	UFC5206LSZH	UFC4206	UFC3206
8 core	UFC9208LSZH	UFC6208LSZH	UFC5208LSZH	UFC4208	UFC3208
12 Core	UFC9212LSZH	UFC6212LSZH	UFC5212LSZH	UFC4212	UFC3212



3. OPTICAL FIBER

Items		Specifications
Fiber Type		9/125 μm (OS2)
Max. / Typ. Attenuation	1310 nm	≤ 0.35 / ≤ 0.33 dB/km
	1383 nm	≤ 0.35 / ≤ 0.31 dB/km
	1550 nm	≤ 0.20 / ≤ 0.19 dB/km
	1625 nm	≤ 0.23 / ≤ 0.20 dB/km
Core	Mode Field Diameter	9.2 ± 0.4 μm @ 1310 nm 10.4 ± 0.5 μm @ 1550 nm
Cladding Diameter		125 ± 0.7 μm
Coating Diameter		250 ± 5 μm
Cladding Non-circularity		≤ 0.7 %
Core/Cladding Concentricity error		≤ 0.5 μm
Coating/Cladding Concentricity error		≤ 12 μm
Zero Dispersion Wavelength		1300 ~ 1324 nm
Zero Dispersion Slope		≤ 0.092 ps/(nm ² .km)
Cut-off Wavelength	λ _o (Fiber)	1150 ~ 1330 nm
	λ _∞ (Cable)	≤ 1260 nm
Proof Test Stress		100 Kpsi
Chromatic Dispersion	λ ; 1285~1340nm	≤ 3.5 ps/nm.km
	λ = 1550nm	≤ 18 ps/nm.km
	λ = 1625nm	≤ 22 ps/nm.km
Polarization mode dispersion (PMD)		≤ 0.20 ps/√km
Fiber Curl		≥ 4M
Numerical Aperture		0.130 ± 0.010
Group refractive index	1310nm	1.4676
	1550nm	1.4682

Table 1 The Optical, Geometrical Performance of the Singlemode Fiber (The specification conforms to the requirement of ISO/IEC11801, ANSI/TIA-568-C.3, IEC 60793-2B1.3, ITU-T G.652D)

Items		Specifications			
Fiber Type		62.5/125 μm (OM1)	50/125 μm (OM2)	50/125 μm (OM3)	50/125 μm (OM4)
Max./ Typ. Attenuation (dB/km)	850 nm	≤ 3.0 / ≤ 2.7	≤ 2.7 / ≤ 2.5	≤ 2.7 / ≤ 2.3	≤ 2.7 / ≤ 2.3
	1300 nm	≤ 0.8 / ≤ 0.6	≤ 0.8 / ≤ 0.7	≤ 0.8 / ≤ 0.6	≤ 0.8 / ≤ 0.6
Bandwidth (MHz/km)	850 nm	≥ 200	≥ 500	≥ 1500	≥ 3500
	1300 nm	≥ 600	≥ 500	≥ 500	≥ 500
850nm Laser Bandwidth (MHz/km)		N.A	N.A	≥ 2000	≥ 4700
Core Diameter (μm)		62.5 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5
Cladding Diameter (μm)		125 ± 1	125 ± 1	125 ± 1	125 ± 1
Core Non-circularity (%)		≤ 5	≤ 5	≤ 5	≤ 5
Cladding Non-circularity (%)		≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Core/Cladding Concentricity error (μm)		≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Coating Diameter, Primary (μm)		242 ± 5	242 ± 5	242 ± 5	242 ± 5
Coating Diameter, Secondary (μm)		250 ± 5	250 ± 5	250 ± 5	250 ± 5
Coating Non-Circularity (%)		≤ 5	≤ 5	≤ 5	≤ 5
Coating/Cladding Concentricity error (μm)		≤ 12	≤ 12	≤ 12	≤ 12
Proof Test Stress (kpsi)		100	100	100	100
Bending Loss @ 850 & 1300 nm (100 turns, D=75 mm)		≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB	≤ 0.5 dB
Zero-Dispersion Wavelength		1332~1354	1295~1315nm	1295~1315nm	1295~1315nm
Zero-Dispersion Slope (ps/(nm ² .km))		≤ 0.097	≤ 0.101	≤ 0.101	≤ 0.101
Numerical Aperture		0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015
Group refractive index	850nm	1.496	1.482	1.482	1.482
	1300nm	1.491	1.477	1.477	1.477

Table 2 The optical, Geometrical Performance of the Multimode Fiber (The specification conforms to the requirement of ISO/IEC11801, ANSI/TIA-568-C.3, IEC 60793-2A1a, IEC 60793-2A1b, ITU -T G.651)



4. CABLE CONSTRUCTION

The construction of the cable shall be in accordance with Table 3 below.

Items		Specifications			
Number of fiber		4 Core	6 Core	8 Core	12 Core
Tight Buffer	Material	FR-PVC with color coding			
	Outer Diameter	900 μm			
Strength Member		Aramid Yarn			
Outer Jacket	Material	FR-LSZH			
Cable Diameter(Approx.)		4.8 ± 0.2 mm	5.4± 0.2 mm	5.9 ± 0.2 mm	6.8 ± 0.2 mm
Cable Weight (Approx.)		21 kg/km	26 kg/km	33 kg/km	42 kg/km

Table 3 Construction of INDOOR, DISTRIBUTION, LSZH, FIBER OPTIC CABLE

5. TEMPERATURE RANGE

For the cables covered by this specification, the following temperature ranges apply.

- Operation Temperature : -40°C to +80°C
- Installation Temperature : -40°C to +80°C
- Storage/Shipping Temperature : -40°C to +85°C

6. MECHANICAL SPECIFICATION

Item		Specification			
Number of fiber		4 Core	6 Core	8 Core	12 Core
Maximum Tensile load	Installation	660N	660N	900N	900N
	Operation	220N	220N	300N	300N
Minimum bending Radius	Installation	7.2 cm	8.1 cm	8.8 cm	10.2 cm
	Operation	4.8 cm	5.4 cm	5.9 cm	6.8 cm

Table 4 Mechanical Specification of the cable.



7. TIGHT BUFFER

The color code of the tight buffer in accordance with Table 5 TIA/EIA-598-C (Rev. TIA/EIA-598-A) and EIA-359-A Color Code for Fiber and Loose tube Identification.

No.	Fiber color
1	Blue
2	Orange
3	Green
4	Brown
5	Slate
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Rose
12	Aqua

Table 5 TIA/EIA-598-C Color Code for tight buffer Identification.

- END OF SPECIFICATION -



Specifications subject to change without notice. Revised 02/2017
©Copyright 2006 are Trademark and all rights reserved.