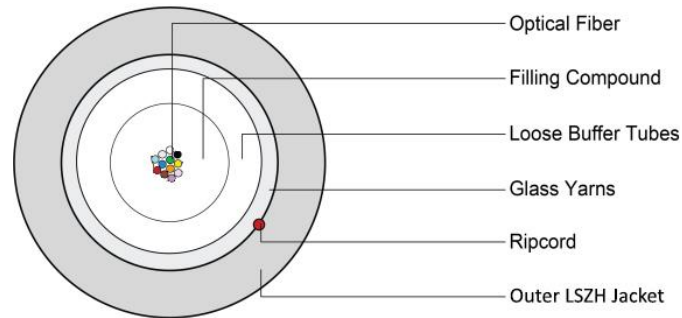




Fiber Optic, Loose-Tube, Un-Armoured, Jelly-filled, Unitube LSZH Cable



Description

Avalon single jacket un-armoured central loose tube cable is a UV-stabilized, fully water blocked cable for Indoor/Outdoor applications (LSZH outer jacket). The loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.

This lightweight cable offers durability and flexibility required for many outside plant applications. Its compact design is suitable for limited conduit space and the cables are well suited for campus-type environments in and between buildings without building entry joints.

The fiber cable contains 2 to 12 fibers individually coated with 250µm layer and color coded as per Telcordia requirements. The optical fibers are contained inside a central loose tube with thixotropic gel to prevent water penetration and protect the fibers against shock. The central loose tube is surrounded by glass yarn, water swell-able yarn, rip cord and a LSZH jacket. The glass yarn layer provides tensile strength and offers limited rodent protection.

The fiber optic central loose tube cable is RoHS compliant and exceeds all the requirements as per the industry standards.

Features and Benefits

- Fiber-count 2-12 fibers
- Central loose-tube design
- Lightweight construction
- Low Smoke Zero Halogen
- OS2, OM3 and OM4 performance types
- Color-Coded fibers for easy identification
- Compact design for limited conduit space
- Limited Rodent resistant

Applications

- Building Interconnections (Campus LAN)
- FTTx & Telecommunications Networks
- Cable TV and security applications
- Telemetry applications

Standards

- ITU.T G.652D
- ANSI/TIA-568-C.3 / ISO/IEC 11801
- IEC 60793 / IEC 60794
- IEC 60332-1-2, IEC 60332-3-24, IEC 60754-1,2 & IEC 61034-2

Specifications

Optical Characteristics: Singlemode-9/125 μm OS2-G.652D

Fiber Type		Unit	OS2 G.652D	
Wavelength		nm	1310	1550
Attenuation		dB/km	≤ 0.35	≤ 0.21
Chromatic dispersion		ps/nm.km	≤ 3.5	≤ 18
Zero dispersion wavelength		nm	1300 ~ 1324	
Zero dispersion slope		ps/nm ² .km	≤ 0.092	
PMD		ps/ $\sqrt{\text{km}}$	≤ 0.2	
Cut-off wavelength		nm	≤ 1260	
Mode-field diameter		μm	9.2 ± 0.4	10.4 ± 0.5
	30mm radius x 100 turns		-	≤ 0.05
Macro Bend Loss	15mm radius x 10 turns	dB	-	-
	10mm radius x 1 turns		-	-
	7.5mm radius x 1turns		-	-
Core/Clad ConcentricityError		μm	≤ 0.8	
Cladding Diameter		μm	125 ± 1	
Cladding Non-circularity		%	≤ 1.0	
Coating Diameter		%	245 ± 15	
Proof Test Level		kpsi	≥ 100	
Fiber curl		m	≥ 4	

Specifications

Optical Characteristics: Multimode - 62.5 μm (OM1), 50μm (OM2, OM3, OM4)

Fiber Type		OM1		OM2		OM3		OM4	
Wavelength	nm	850	1300	850	1300	850	1300	850	1300
Attenuation	dB/km	≤ 3.5	≤ 1.0	≤ 3.0	≤ 1.0	≤ 3.0	≤ 1.0	≤ 3.0	≤ 1.0
Over filled Launch Bandwidth (LEDbased sources)	MHz.km	≥ 200	≥ 500	≥ 500	≥ 500	≥ 1500	≥ 500	≥ 3500	≥ 500
Effective Modal Bandwidth (850 nm Laser based sources)	MHz.km	-	-	-	-	≥ 2000	-	≥ 4700	-
Numerical aperture	-	0.275 ± 0.015		0.20 ± 0.015		0.20 ± 0.015		0.20 ± 0.015	
Core diameter	μm	62.5 ± 3.0		50 ± 3.0		50 ± 3.0		50 ± 3.0	
Core Non-Circularity	%	≤ 6.0		≤ 6.0		≤ 6.0		≤ 6.0	
Cladding diameter	μm	125 ± 2.0		125 ± 2.0		125 ± 2.0		125 ± 2.0	
Cladding Non-Circularity	%	≤ 2.0		≤ 2.0		≤ 2.0		≤ 2.0	
Core / Cladding Concentricity Error	μm	≤ 3.0		≤ 3.0		≤ 3.0		≤ 3.0	
Coating diameter	μm	245 ± 5.0		245 ± 5.0		245 ± 5.0		245 ± 5.0	
Proof test level	Kpsi	≤ 100		≤ 100		≤ 100		≤ 100	

Cable Construction

Construction of single unit cables		
Number of fibers	Max. 12	
Filling Compound in Loose BufferTube	Singlemode – 9/125 μm (OS2 G.652D), G.657A1/A2, B1, B2 Multimode – 62.5/125 μm (OM1), 50/125 μm (OM2, OM3, OM4)	
Loose buffer tube	PBT (Polybutylene Terephthalate) 4.0 mm Ø	
Strength Member	Glass yarn	
Water blocking material	Water swell-able yarns	
Outer JacketMaterial	Material	UV Black LSZH
	Thickness	Nominal 1.0mm

Colour of Buffer

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Transmission Performance

Application	OS2 Singlemode (1310/1383/1550)	OM1 Multimode (850/1300)	OM2 Multimode (850/1300)	OM3 Multimode (850/1300)	OM4 Multimode (850/1300)
100Base-FX, Ethernet, @ 1300nm	-	2000m	2000m	2000m	2000m
100Base-LX, @ 1310nm	10000m	-	-	-	-
1000Base-SX, Gigabit, Ethernet @ 850nm	-	275m	550m	550m	550m
100Base-LX, Gigabit Ethernet, @ 1310nm	10000m	550m	550m	550m	550m
10GBase-SR, 10Gbps @ 850nm	-	33m	82m	300m	550m
10GBase-LR, 10Gbps @ 1310nm	10000m	-	-	-	-
40GBase-SR, 40Gbps @ 850nm	-	-	-	100m	150m
40GBase-LR4, 40Gbps @ 1310nm	10000m	-	-	-	-
100GBase-SR10, 100Gbps @ 850nm	-	-	-	100m	150m
100Base-LR4, 100Gbps, @ 1310nm	10000m				
100Base-ER4, 100Gbps, @ 1550nm	30000m	-	-	-	-

Environmental Data

Temperature range	Value
Storage	- 10° C to +70° C
Service	- 10° C to +70° C
Installation	- 10° C to +60° C

Mechanical Specifications

Tensile Load / Strength	IEC 60794-1-2-E1	1600N
Crush Resistance	IEC 60794-1-2-E3	1100N/cm
Impact Resistance	IEC 60794-1-2-E4	1 impacts @ 3 points, 15Nm /15J
Torsion Test	IEC 60794-1-2-E7	± 180°, ± 1 turn/2m
Cable Bend	IEC 60794-1-2-E11	20 D for 4 turns, 10 Cycles
Drip test	IEC-60794-1-E14	30 cm, 70°C, 24 hour
Temperature Cycling	IEC 60794-1-2-F1	23°C → -10°C → 70°C
Water penetration	IEC 60794-1-2-F5	1 meter head, 3 meter / 24 hours



Physical Specifications

No. of fibers	Nominal cable diameter	Nominal weight	Maximum tensile load		Crush load		Min. bend radius	
			Shortterm	Longterm	Short term	Long term	Loaded	Installed
	mm	Kg/km	N	N	N/cm	N/cm	mm	mm
2	7.5	50/65	1600	550	110	55	148	74
4	7.5	50/65	1600	550	110	55	148	74
6	7.5	50/65	1600	550	110	55	148	74
8	7.5	50/65	1600	550	110	55	148	74
12	7.5	50/65	1600	550	110	55	148	74

Ordering Information

Part Number	Description
ANFC-XXX-YYY-LT-LSZH	Fiber Optic, Loose-Tube, Un-Armoured, Jelly-filled, Unitube LSZH Cable

* XXX = SM (OS2), OM1, OM2, OM3, OM4

* YYY = Number of Cores 004, 006, 012

Standard reel length 2000m