



Mini-ADSS, OUTDOOR, 3 TWISTED-TUBE, SINGLE JACKET, FIBER OPTIC CABLE

1. APPLICATION

This specification covers the construction and properties of Mini-ADSS (All Dielectric Self-Support), Outdoor, 3 Twisted-tube, Single Jacket, fiber optic cable for aerial and duct installation. LINK fiber optic cable supports 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 Mini-ADSS, Outdoor/Multi-tube, Single Jacket, fiber optic cable. Single-mode color coded fibers are housed in multiple color coded plastic buffer tubes which are stranded around a dielectric central strength member. Dry water blocking tapes wrapped around the core, provide protection against water ingress. These user friendly elements replace the sticky cable filling gel used in traditional loose tube cable designs. Water Blocking E-glass yarns, which provide additional tensile strength, are applied over the cable core. The cable sheath is high density polyethylene 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 640	IEC 60793, IEC 60794-1-2
Telcordia (Bellcore) GR-20-CORE	EN 50173-1
IEEE P-1222	EN 187000
ITU-T G.652D(Singlemode)	TIS 2166-2548
RoHS Compliant	

2. ORDER INFORMATION

Mini-ADSS, OUTDOOR, 3 TWISTED-TUBE, SINGLE JACKET, FIBER OPTIC CABLE

No. Cores	OS2, SM 9/125 μm
4 Core	UFC9704MN
6 Core	UFC9706MN
12 Core	UFC9712MN
24 Core	UFC9724MN

3. OPTICAL FIBER

Items		Specifications
Fiber Type		9/125 μm (OS2)
Max. / Typ. Attenuation	1310 nm	$\leq 0.35 / \leq 0.33$ dB/km
	1383 nm	$\leq 0.35 / \leq 0.31$ dB/km
	1550 nm	$\leq 0.21 / \leq 0.19$ dB/km
	1625 nm	$\leq 0.23 / \leq 0.20$ dB/km
Core	Mode Field Diameter	9.2 \pm 0.4 μm @ 1310 nm 10.4 \pm 0.5 μm @ 1550 nm
Cladding Diameter		125 \pm 0.7 μm
Coating Diameter, Primary		242 \pm 5 μm
Coating Diameter, Secondary		250 \pm 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_0 (Fiber)	1150 ~ 1330 nm
	λ_∞ (Cable)	≤ 1260 nm
Proof Test Stress		100 Kpsi
Chromatic Dispersion	λ ; 1285~1340nm	≤ 3.5 ps/nm.km
	$\lambda = 1550$ nm	≤ 18 ps/nm.km
	$\lambda = 1625$ nm	≤ 22 ps/nm.km
Polarization mode dispersion (PMD)		≤ 0.20 ps/ $\sqrt{\text{km}}$
Fiber Curl		≥ 4 M
Numerical Aperture		0.130 \pm 0.010
Group refractive index	1310nm	1.4676
	1550nm	1.4682

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

4. CABLE CONSTRUCTION

The construction of the cable shall be in accordance with Table 2 below.

Item		Description			
Number of fibers		4	6	12	24
Loose Tube	Material	PBT (Polybutylene Terephthalate) with color coding			
	Filling Compound	Thixotropic Jelly Compound			
	Fiber per Tube	4	6	12	
	Number	1		2	
Filler Rod	Material	Plastic rod, natural color			
	Number	1		0	
Stranding	Method	Reverse oscillating lay (ROL) technique (SZ Direction)			
Strength Member	Material	FRP (Fiberglass Reinforce with Plastic), natural color			
	Number	1			
Additional Strength Member	Material	Water Blocking E-Glass Yarn (aramid yarn is available on request)			
Water Blocking Tape	Thickness	0.3 ± 0.05 mm			
Ripcord	Material	Plastic thread			
	Number	1			
Outer Sheath	Material	UV-Proof, Black HDPE (with color strip is available on request)			
	Thickness(Approx.)	1.0 mm			
Cable Diameter (Approx.)		6.9 ± 0.5 mm		7.4 ± 0.5 mm	
Cable Weight (Approx.)		43 ± 5 kg/km		50 ± 5 kg/km	

Table 2 Construction of Mini-ADSS, Outdoor/Multi-tube, Single Jacket, Fiber optic cable.

5. TEMPERATURE RANGE

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

- Operation Temperature : -40°C to +70°C
- Installation Temperature : -40°C to +70°C
- Storage/Shipping Temperature : -40°C to +75°C

6. MECHANICAL SPECIFICATION

Item		Specification
Maximum Span Length	Sag 0.5%	40 m.
	Sag 1.0%	80 m.
Maximum Wind Velocity		126 km. /hr.
Max. Tensile load	Installation	1,200 N.
	Operation	600 N.
Maximum Crush resistance		2,200 N. /10 cm.
Minimum bending Radius	Installation	20 x Diameter of Cable
	Operation	10 x Diameter of Cable

Table 3 Mechanical Specification of the cable.

7. FIBER AND LOOSE TUBE IDENTIFICATION

The color code of the loose tubes and the individual fibers within each loose tube shall be in accordance with Table 4 below TIA/EIA-598-C (Rev. TIA/EIA-598-A) and EIA-359-A Color Code for Fiber and Loose tube Identification.

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

Table 4 TIA/EIA-598-C Color Code for Fiber and Loose tube Identification.

8. MECHANICAL PERFORMANCE TEST

- Tensile loading Test TIA/EIA-455-33A and IEC 60794-1-2-E1A
- Compression Test TIA/EIA-455-41A and IEC 60794-1-2-E3
- Repeated Bending Test TIA/EIA-455-104A and IEC 60794-1-2-E6
- Impact Test TIA/EIA-455-25B and IEC 60794-1-2-E4
- Cable Bending Test IEC 60794-1-2-E11B
- Cable Twist or Torsion Test TIA/EIA-455-85A and IEC 60794-1-2-E7
- Temperature Cycling Test TIA/EIA-455-3A and IEC 60794-1-2-F1
- Water Penetration Test TIA/EIA-455-82B and IEC 60794-1-2-F5

- END OF SPECIFICATION -



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