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LINK AMERICAN CABLING



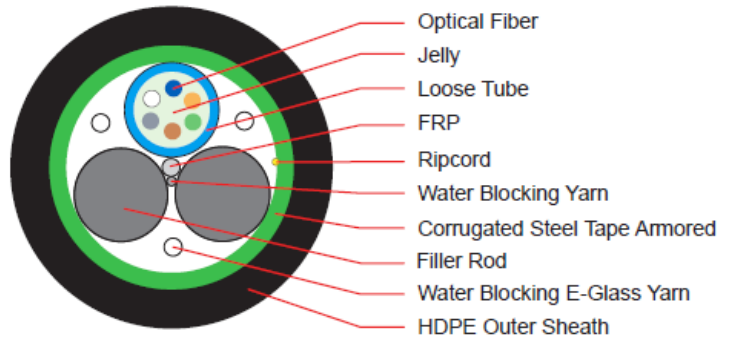
F.O. Mini ARSS, OS2, 3 TWISTED - TUBE

Scope of Application

This specification covers the construction and properties of Mini ARSS (Anti-Rodent Self-Support), Outdoor, 3 Twisted-tube, Single Jacket, fiber optic cable for aerial, direct buried and duct installation. LINK fiber optic cable supports application such as 25/40/50/100/200/400Gbps Ethernet, IEEE802.3ae 10G Ethernet, IEEE802.3z Gigabit Ethernet, IEEE802.3u Fast Ethernet, 52/155/622Mbps, 1.2Gbps ATM, FDDI, Fiber channel, FTTx, CATV, CCTV and others.

LINK Mini ARSS, Outdoor, 3 twisted-tube, Single Jacket, Fiber optic cable. Single-mode color coded fibers are housed in multiple color coded plastic loose tubes and filler rod which are stranded around central strength member. Dry water blocking yarns, provide protection against water ingress. These user friendly elements replace the sticky cable filling gel used in traditional loose tube cable designs. FRP which provide tensile strength. Water blocking E-glass yarns provide for additional strength member and water blocking. Corrugated steel tape provide for anti-rodent protection. The cable sheath is high density polyethylene jacket which contain 4 to 24 cores.

Drawing



Technical Standard

- ANSI/TIA-568.3-D
- ANSI/TIA-568-C.3
- ANSI/ICEA 640
- Telcordia (Bellcore) GR-20-CORE
- ITU-T G.652D (Singlemode)
- RoHS Compliant

- ISO/IEC 11801:2011
- ISO/IEC 11801:2017
- IEC 60793, IEC 60794-1-2
- EN 50173-1
- TIS 2166-2548





OPTICAL FIBER

Items		Specifications
Fiber Type		9/125 μm (OS2)
Max. / Typ. Attenuation	1310 nm	$\leq 0.35/0.33$ dB/km
	1383 nm	$\leq 0.35/0.31$ dB/km
	1550 nm	$\leq 0.21/0.19$ dB/km
	1625 nm	$\leq 0.23/0.20$ 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
Attenuation (Homogeneity)		Max 0.1 dB/km
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 ; 1285~1340 nm	≤ 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		$\geq 4\text{M}$
Numerical Aperture		0.130 \pm 0.010
Group refractive index	1310 nm	1.4676
	1550 nm	1.4682

Table 1 The Optical, Geometrical Performance of the Singlemode Fiber (The specification conforms to the requirement of ISO/IEC11801, ANSI/TIA-568.3-D, IEC 60793-2B1.3, ITU-T G.652D)



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	2		1	
Stranding	Method	Reverse oscillating lay (ROL) technique (SZ Direction)			
Central Strength Member	Material	FRP (Fiberglass Reinforce with Plastic), natural color			
	Number	1			
Water Blocking Yarn	Material	Suitable Water Swellable Materials (Dry-Core Technology)			
Additional Strength Member	Material	Water Blocking E-Glass Yarn (aramid yarn is available on request)			
Ripcord	Material	Plastic thread			
	Number	1			
Armored	Material	Corrugated chrome steel tape coated with polymer			
	Thickness	Steel & Polymer coating : 0.25 mm			
Outer Sheath	Material	UV-Proof, Black HDPE (with color strip is available on request)			
	Thickness (Approx.)	1.6 mm			
Cable Diameter (Approx.)		8.5 ± 0.5 mm		8.8 ± 0.5 mm	
Cable Weight (Approx.)		60 ± 5 kg/km		65 ± 5 kg/km	

Table 2 Construction of Mini ARSS, Outdoor, 3 Twisted-tube, Armored, Single Jacket, Fiber optic cable.

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

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	3,400 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.



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 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.

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

ORDER INFORMATION

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

Descriptions	OS2, SM 9/125 μm
4 Core	UFC9704A
6 Core	UFC9706A
12 Core	UFC9712A
24 Core	UFC9724A

Specifications subject to change without notice.

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