

FIBER OPTIC CABLE

ADSS FIBER OPTIC SINGLE JACKET



PRODUCT DESCRIPTION

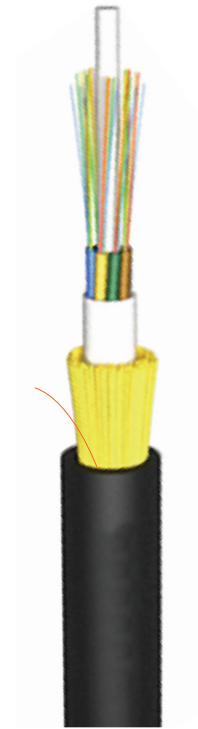
- The cable shall be used for aerial or duct installed.
- Provide additional mechanical protection.
- low friction installation.
- Excellent protection from environmental hazards.
- Single Mode.
- Color code fiber and Loose tube in standard.

APPLICATION

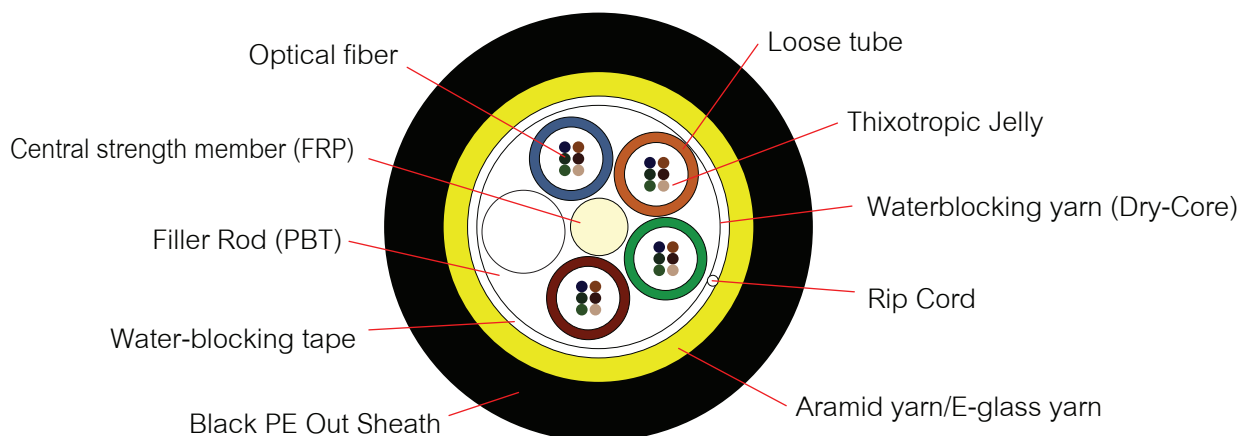
Outdoor environment with high electric field strength in the Power communication system and the area where frequent thunder happens suitable for both aerial or duct installation.

STANDARD

- ATM, FDDI, FTTX, Fiber Channel, CATV, Communication
- ISO/IEC 11801:2007, ISO/IEC 11801:2011(Ed.2.2)
- ANSI/TIA/EIA-568-B.3, ANSI/TIA-568-C.3, ANSI/TIA-568.3-D, ANSI/ICEA 640
- Telcordia (Bellcore) GR-20CORE
- ANSI/ICEA 596, ICEA696, IEC61034-2, IEC60754-2, IEC60793, IEC60794-1-2
- ITU G.652D, ITU-TG 657A2
- TIA/EIA-598-C (Rev. TIA/EIA-598-A), EIA-359-A.
- IEEE802.3z, IEEE802.3ae, IEEE802.3 (LAN, Ethernet Fast Ethernet, Gigabit Ethernet and 10 Gigabit Ethernet 40-100 Gbps)
- RoHS compliant
- TISI-2166



F-ML-ADSS9-XX-SJ



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CONSTRUCTION CABLE

Cable type		ADSS
Element	-	5
Central strength member	Material	FRP 0.5mm
Loose tube	Material	PBT
	Diameter	2.0mm
	-	6 fiber per tube, Thixotropic Jelly compound.
Protective tape	Material	Water -blocking tape
Strength member	Material	Aramid yarns
	Thickness	0.5 mm
Outer Sheath	Material	UV-Proof Black HDPE (non Rodent Repellent/Rodent Repellent)
	Thickness	1.8mm
Tensile Load	Short term	3600N
	Long term	1800N
	Pressure	2200N/10CM
Overall diameter	Diameter	9.5 mm
Weight	-	Approx. 43±10 kg/km
Span Length		80-100m
Operating temperature	Storage	-40°C - 75°C
	Installing	-40°C - 70°C
Relative humidity		Up to 90%, no frost
Pole mount	-	40-80 m and wind force 126 Km/hr
Bending	Installing	20
	Using	10

BUFFER TUBE STRANDING

Fiber count	Fiber number per tube	Number of tube / filler	Nom. Diameter(mm)	Nom. Weight(kg/km)
12	6	2/3	11.4	100
24	6	4/1	11.4	100
48	12	4/1	11.8	105
60	12	5/0	11.8	105

IDENTIFICATION COLOR CODE FOR FIBER AND TUBE

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

OPTICAL FIBER CHARACTERISTICS

CATEGORY	DESCRIPTION	SPECIFICATIONS
Optical Specifications		G.652D
Attenuation	@1310nm	$\leq 0.35/\leq 0.33$ dB/km
	@1383nm	$\leq 0.35/\leq 0.31$ dB/km
	@1550nm	$\leq 0.21/\leq 0.19$ dB/km
	@1625nm	$\leq 0.23/\leq 0.20$ dB/km
Attenuation discontinuity		≤ 0.05 dB
Attenuation vs. Wavelength	1285 -1330 @1310nm	≤ 0.05 dB/km
	1525 -1575 @1550nm	≤ 0.05 dB/km
Zero dispersion wavelength		1300 -1324nm
Zero dispersion slope		≤ 0.092 ps/(nm ² .km)
Dispersion	@1310nm	≤ 3.5 ps/nm.km
	@1550nm	≤ 18 ps/nm.km
Polarization mode dispersion(PMD)		≤ 0.2 ps/km ^{1/2}
Cable cutoff wavelength (λ_{cc})	@1310nm	≤ 1260 nm
Effective group index of reaction	@1550nm	1.4675
		1.4681
Geometric Specifications		
Mode field diameter	@1310nm	9.2 ± 0.4 μm
	@1550nm	10.4 ± 0.5 μm
Cladding diameter		125 ± 1 μm
Cladding non-circularity		$\leq 1.0\%$
Coating diameter		250 ± 5 μm
Coating/Cladding concentricity error		≤ 12 μm
Core/Cladding concentricity error		≤ 0.8 μm
Color Fiber Diameter		250 μm ± 15 μm (Colored)
Mechanical Specifications		
Proof test level		$\geq 1.0\%$
Fiber curl radius		≥ 4.0 m
Peak coating strip force		1.3-8.9N

PACKING AND DRUM

The cable is rounded on a non-returnable wooden drum. Both ends of cable are securely fastened to drum and sealed with a shrinkable cap to prevent ingress of moisture. The following information shall be marked on the outer sheath of the cable at an interval of about 1 meter.

- Cable type and number of optical fiber
- Manufacturer name
- Month and Year of Manufacture
- Cable length

The sequential number of the cable length shall be marked on the outer sheath of the cable at an interval of 1 meter ± 1%

TEST REQUIREMENTS

Item	Method	Acceptance criteria
Tensile test	- Max. tensile strength: 3000 N	-Fiber strain at maximum
IEC 60794-1-2-E1A	- Sample length: 50-100 meters	-Load max. 0.33%
TIA/EIA-455-33A	- Times: 1 Hour	-Attenuation increase $\leq$ 0.1 dB
Crush or Compression test	- Load: 2200 N	-No splits or cracks in the outer jacket
IEC 60794-1-2-E3	- Time: 10 minutes	-Attenuation increase < 0.10 dB
TIA/EIA-455-41A	- Length: 100 mm.	
Impact test	- Impact energy: 450 g	- No splits or cracks in the outer jacket
IEC 60794-1-2-E4	- Height: 1 meter	-Attenuation increase $\leq$ 0.10 dB (after the test)
TIA/EIA-455-25C	- Impact points: min.1	
	- Number of impacts: 5	
Cable Twist or Torsion test	- 1 m. cable length with 150 N weight	- No splits or cracks in the outer jacket
IEC 60794-1-2-E7	- $\pm 180^\circ$, 10 cycles	- Attenuation increase $\leq$ 0.10 dB (after the test)
TIA/EIA-455-85A		
Repeated bending	- Radius = 20 $\times$ cable outer diameter	- No splits or cracks in the outer jacket
IEC 60794-1-2-E6,	- 1 m. cable length with 150 N weight , 25 cycles	-Attenuation increase $\leq$ 0.10 dB (after the test)
TIA/EIA-455-104A		
Cable bending Test		
IEC 60794-1-2-E11B		
Temperature cycling test	- Temperature step: +20 $^\circ\text{C}$ ~ -40 $^\circ\text{C}$ ~ +75 $^\circ\text{C}$	-Attenuation variation for reference
IEC 60794-1-2-F1	- Time per each step: 12 hrs.	value(the attenuation to be measured before
TIA/EIA-455-3A	- Number of cycles: 2 cycles	test at + 20 $\pm$ 3 $^\circ\text{C}$) $\leq$ 0.10 dB/km
Water penetration test	- Water height: 1m.	-No water leakage at the end of the sample
IEC 60794-1-2-F5	- Sample length: 3m.	
TIA/EIA-455-82B	- Duration of test: 1 hrs	
Compound Flow test	- Five 0.3 m. samples suspended vertically in a climate	-No filling compound shall drip from tubes after 24 hrs.
IEC 60794-1-2-E14	chamber, raised temperature to +70 $^\circ\text{C}$ $\pm$ 2 $^\circ\text{C}$	
TIA/EIA-455-81	- Times: 1 Hour	

ORDER INFOMATION

PRODUCT	PART NUMBER
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, SM 9/125 6 Core	F-ML-ADSS9-06-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, SM 9/125 12Core	F-ML-ADSS9-12-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, SM 9/125 24Core	F-ML-ADSS9-24-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, SM 9/125 48Core	F-ML-ADSS9-48-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, SM 9/125 96Core	F-ML-ADSS9-96-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, SM 9/125 120Core	F-ML-ADSS9-120-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, Rodent Repellent SM 9/125 12Core	F-MLR-ADSS9-12-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, Rodent Repellent SM 9/125 24Core	F-MLR-ADSS9-24-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, Rodent Repellent SM 9/125 48Core	F-MLR-ADSS9-48-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, Rodent Repellent SM 9/125 96Core	F-MLR-ADSS9-96-SJ
Outdoor Cable, Multi Loose Tube, ADSS, Single Jacket, Rodent Repellent SM 9/125 120Core	F-MLR-ADSS9-120-SJ