

Figure-8 MLT Aerial Self-supporting Outdoor Fibre Optic Cable

6F to 36F, Figure-8 Multi loose Tube Aerial Self-Supporting Single Jacket Single Armour Outdoor Cable is designed especially for aerial installations while incorporating metallic armour when extra mechanical protection is desired.

Features

- Compact 250µm loose tube construction
- Figure- 8 cross-sections
- Stranded steel wires messenger
- Double plastic-coated corrugated steel tape- PE bonded outer sheath
- Low dispersion and attenuation
- Small cable diameter, light cable weight, suitable for self-supporting installation
- Outstanding mechanical and environmental performance due to proper design, accurate excess length and cabling process
- Available with various fibre options
- Colour coded fibres for easy identification

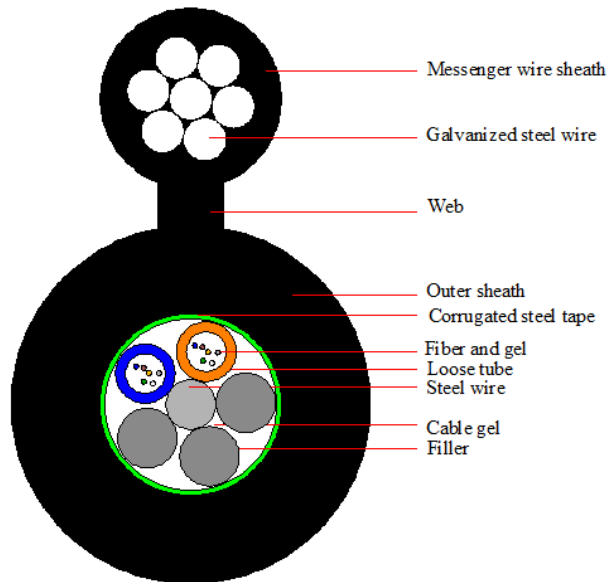
Applications

- Long distance communication
- Self-supporting aerial applications
- Local communication
- CATV
- Computer network transmission system

Specifications

1. Cable Construction

1.1 Cable cross-section



2. Cable Specification

2.1 Colour Code of the Fibre

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

2.2 Loose Tube Colour Code

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

2.3 Cable configuration

Item	Contents	Value			
		6	12	24	36
Loose tube	Material	PBT			
	Type of filling compound	Jelly			
	Number	1	2	4	6
Filler	Material	PP			
	Number	4	3	1	6
Max. fiber counts per tube	G.652D	6	6	6	6
Central strength member	Material	Steel wire			
Armour	Material	Steel Tape			
	Coating Material	Plastic			
Outer sheath	Material	HDPE			
	Color	Black			
Messenger wire	Material	Galvanized steel strands			
	(Number x dia)	7 x 1.0 mm			
Cable diameter (mm) (± 1.0)		8.7*15.7			9.0*16.0
Cable weight (kg/km) ($\pm 20\%$)		138			150

Note: The outer diameter of the cable in the table is for reference. The actual OD value after commissioning production shall prevail.

2.4 Mechanical Performance of Cable

Tensile performance(N)	Crush (N/100mm)
Short term	Short term
3000	1000

2.5 Minimum Allowable Bending Radius

Static: 10D

Dynamic: 20D

D is the out diameter of the cable

3. Mechanical, Electrical and Environmental Test Characteristics

Item	Test Method	Requirements
Tensile performance	IEC 60794-1-21-E1 Load: Tensile Strength Cable length under tension: Not less than 50m. Duration of load sustain: 1min. Velocity of transfer device: 10mm/min	The increase in attenuation shall not exceed 0.1dB, and fiber strain should not be higher than 0.6 % under load. No attenuation increases after test at 1550nm. Under visual examination without magnification, no damage to the sheath or to the cable elements after test.
Crush	IEC 60794-1-21-E3 Load and Duration: Short term load 1000N/100mm for 1 min. Number of tests: 3 Spacing between test places: 500 mm	Under short term load, the increase in attenuation shall less than 0.05dB at 1550 nm after the test. Under visual examination without magnification, no damage to the sheath or to the cable elements. The imprint of the striking surface on the sheath is not considered mechanical damage.
Impact	IEC 60794-1-21-E4 Impact energy: 4.5 J with striking surface radius of 300 mm; Number of impacts: 1, each at 3 different places spaced not less than 500mm apart.	No change in attenuation after the test at 1550nm. Under visual examination without magnification, no damage to the sheath or to the cable elements. The imprint of the striking surface on the sheath is not considered mechanical damage.
Repeated bending	IEC 60794-1-21-E6 Bending radius: 20times cable diameter Cycles: 25 Load: 150N Duration of cycle: Approximately 2s.	No change in attenuation at 1550nm after test. Under visual examination without magnification, no damage to the sheath or to the cable elements
Torsion	IEC 60794-1-21-E7 Cycles:10 Length under test: 1.0 m Turns: $\pm 90^\circ$ Load:150N	Under visual examination without magnification, there shall be no damage to the sheath or to the cable elements. The variation in attenuation for each fibre shall be ≤ 0.10 dB at 1550 nm during the test and no permanent change after test.
Temperature cycling	IEC 60794-1-22-F1 Sample length: at least 1000m Temperature range: $-40^\circ\text{C} \sim +70^\circ\text{C}$ Cycles:2 Temperature cycling test dwell time: 12 hours	The change in attenuation coefficient shall be less than 0.10 dB/km at 1550nm.
Water Penetration	IEC 60794-1-22-F5B Time: 24 hours Sample length: 3m Water height: 1m	No water shall be detected at the unsealed end of the sample during and at the end of the test.
Compound flow	IEC 60794-1-22-F16 Temperature:70C Sample count:5 Sample length:200 \pm 5 mm, Remove length: 100 \pm 2,5 mm, Time:24h	No filling compound dripped.
Other parameters	According to IEC 60794	

Remark: "No attenuation changes" is considered as the attenuation changes ≤ 0.05 dB.

4. Optical properties of the SM fibre is according to ITU-T G.652D standard Requirements

Description	Specification
	After Cable
Mode Field diameter @1310nm	9.2±0.4µm
Mode Field diameter @1550nm	10.4±0.5µm
Cladding diameter	125.0± 1µm
Core concentricity error	≤0.6µm
Cladding non-concircularity	≤ 0.8%
Coating diameter	245±7µm (Before colored)
	250±15µm (colored)
Coating/cladding concentricity error	≤ 12µm
Cable cutoff wavelength	≤1260 nm
Point discontinuity	≤0.05dB
Attenuation coefficient @ 1310 nm	≤0.36dB/km
@ 1383 nm	≤0.36dB/km
@ 1550 nm	≤0.22dB/km
@ 1625nm	≤0.24dB/km
Macro-bend induced attenuation	
100 turns, 30mm radius @1550n/1625m	≤0.05dB
PMD	
Max. individual fiber	≤0.2 ps/km ^{1/2}
PMD _Q	≤0.1 ps/km ^{1/2}
Zero-dispersion wavelength	1300 ~ 1324 nm
Zero-dispersion slope	≤ 0.092 ps/(nm ² .km)
Chromatic dispersion coefficient	
@ 1288-1339 nm	≤3.5ps/(nm. km)
@ 1271-1360nm	≤5.3ps/(nm. km)
@ 1550 nm	≤18ps/(nm. km)
@ 1625 nm	≤22ps/(nm. km)
Proof test level	100 kpsi (0.69 Gpa), 1% strain
Coating strip force (peak value)	1.3~8.9N
Fiber curl (Radius)	≥ 4 m

Ordering Information

	Fibre Type		Jacket Type		Fibre Count	
OFC-ML8A	9	G.652D	2	PE	06	6
	5	G.655		
	A1	G.657A1		
	A2	G.657A2		
					36	36

Example order code

OFC-ML8A	-	9	2	-	24
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Figure-8 Multi Loose Tube Aerial Self-Supporting Outdoor Cable Singlemode G.652D PE 24 Fibres