IU-ODN-CAB-FIG8-024-4KM

DESCRIPTION

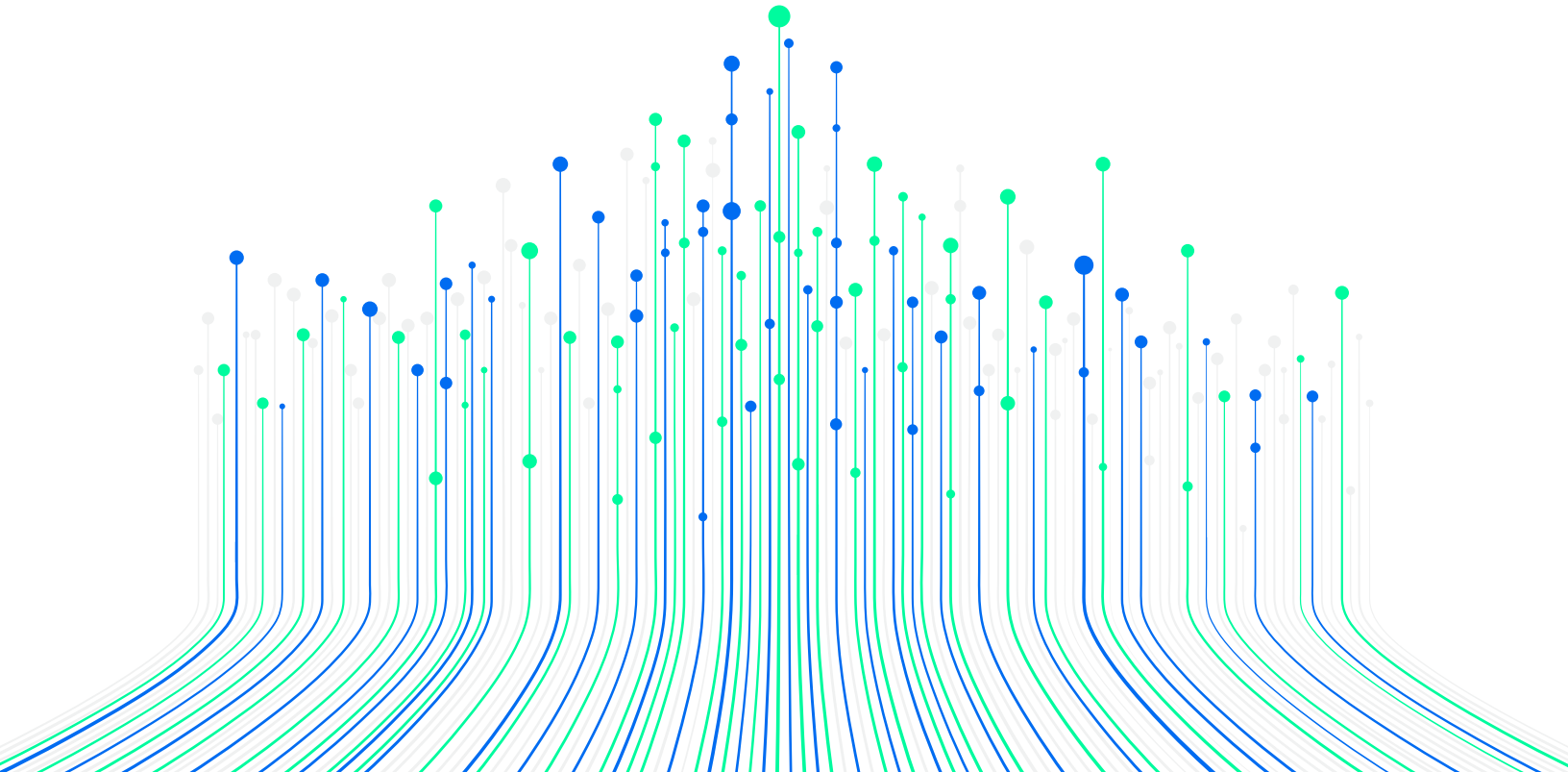
The fibers,either of single-mode or multimode type, are placed in a loose tube made of high modulus plastic. The tubes inside are filled with a water-resistant filling compound.

A center member locates in the center of core as a non- metallic strength member. The tubes (and fillers) are stranded around the strength member into a compact and circular cable core.

Water blocking yarn and water blocking tape to protect cable from water.this part of cable accompanied with the stranded wires as the supporting part are completed with a polyethylene (PE) sheath to be figure 8 structure. This kind of cable is specifically applied for self-supporting aerial installation, ripcord under the sheath.

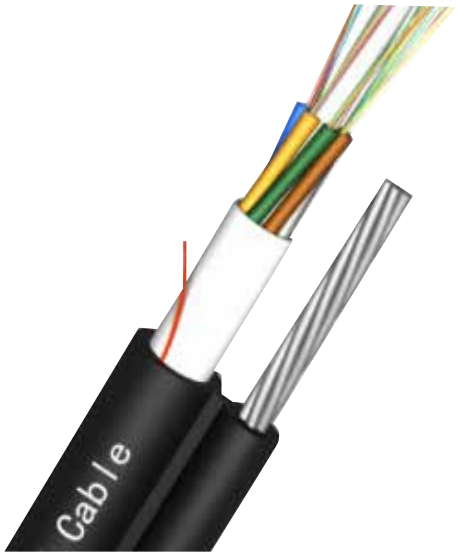
APPLICATION

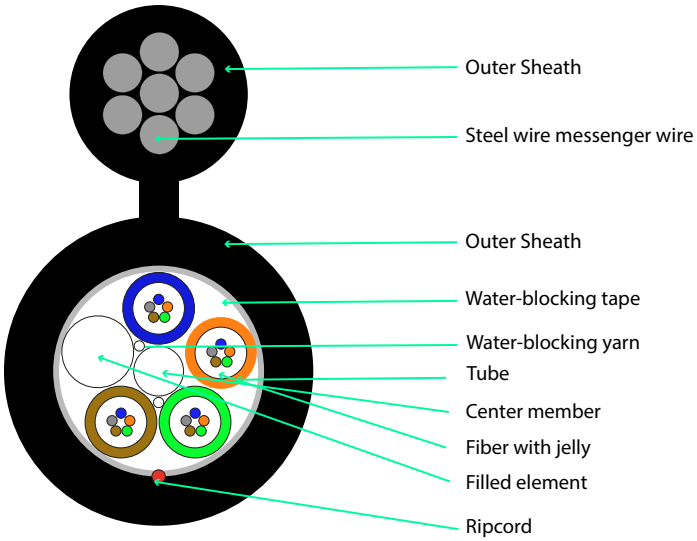
This specification covers the general requirements of Figure 8 self-supporting cable for aerial.



FEATURES

- Accurate fiber excess length ensure a good performance of tensile strength and temperature.
- High strength loose tube that is hydrolysis resistant and special tube filling compound ensure a critical protection of fiber.
- The following measures are taken to ensure the cable watertight:
  FRP as the central strength member
  Water blocking yarn and water blocking tape protect cable from water .
  100% cable core filling





CABLE CONSTRUCTION DETAILS

Number of fiber	24 core	
Self-support part	Material	Steel wire
	Steel wire diameter	0.8mm*7
Loose tube	Material	PBT
	Diameter	Φ1.6mm+/-0.1mm
Filled element	Material	PP
	Diameter	Φ1.6mm+/-0.1mm
Central strength member	Material	FRP
	Diameter	Φ1.4mm
Water blocking	Material 1	Water blocking yarn
	Material 2	Water blocking tape
Outer Sheath	Material	PE
	Diameter	4.5（±0.2）*8.0（±0.2）-13.5（±0.5）mm
Cable Weight	110kg+/-20kg/km	

FIBER COLOR

24 Core						
Tube color	1	2	3	4		
	Blue	Orange	Green	Brown		
Number of fiber per tube 6 cores	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White

CABLE MECHANICAL CHARACTERISTIC

Temperature range	-40+70	-----
Min Bending Radius(mm)	Long term	10D
Min Bending Radius(mm)	Short term	20D
Max allowable Tensile Strength (N)	Long term	2000
	Short term	4000
Max allowable Crush Strength(N)	Long term	1000
	Short term	2000
Operation temperature (°C)	-40+70	
Installation temperature (°C)	-20+60	
Storage temperature (°C)	-40+70	

BARE FIBER CHARACTERISTIC

Characteristic	Condition	Specified values	Units
Attenuation	1310nm	≤0.34 ≤0.36 after cable	[dB/km]
	1550nm	≤0.20 ≤0.25 after cable	[dB/km]
	1383nm after H2-aging	≤0.34	[dB/km]
	1625nm	≤0.24	[dB/km]

Attenuation vs. Wavelength Max.α difference	1285-1330nm, in reference to 1310nm	≤0.03	[dB/km]
	1525-1575nm, in reference to 1550nm	≤0.02	[dB/km]
Dispersion Coefficient	1285-1340nm	-3.5 to 3.5	[ps/(nm.km)]
	1550nm	≤18	[ps/(nm.km)]
	1625nm	≤22	[ps/(nm.km)]
Zero Dispersion Wavelength(λ0)	--	1300-1324	[nm]
Zero Dispersion Slope(S0)	--	≤0.092	[ps/(nm2.km)]
Typical Value	--	0,086	[ps/(nm2.km)]
PMD	--	≤0.1	$ps\sqrt{km}$
	--	≤0.06	$ps\sqrt{km}$
	--	0,04	$ps\sqrt{km}$
Cable Cutoff Wavelength (λcc)	--	≤1260	[nm]
Mode Field Diameter (MFD)	1310nm	8.7-9.5	[nm]
	1550nm	9.8-10.8	[nm]
Effective Group Index Refraction (Neff)	1310nm	1.466	--
	1550nm	1.467	--
Point Discontinuities	1310nm	≤0.05	[dB]
	1550nm	≤0.05	[dB]
Geometrical Characteristics			
Cladding Diameter	--	125.0±0.7	[μm]
Cladding Non-Circularity	--	≤1.0	[%]
Coating Diameter	--	235-250	[μm]
Coating-Cladding Concentricity Error	--	≤12.0	[μm]
Coating Non-Circularity	--	≤6.0	[%]
Core-Cladding Concentricity Error	--	≤0.6	[μm]
Curl(radius)	--	≥4	[m]

Environmental Characteristics	1310nm,1550nm&1625nm		
Temperature Dependence Induced Attenuation	-60°C to +85°C	≤0.05	[dB/km]
Temperature-Humidity Cycling Induced Attenuation	-10°C to +85°C, 98% RH	≤0.05	[dB/km]
Water Immersion Dependence induced Attenuation	23°C, for 30 days	≤0.05	[dB/km]
Damp Heat Dependence Induced Attenuation	85°C and 85% RH, for 30 days	≤0.05	[dB/km]
Dry Heat Aging	85°C for 30 days	≤0.05	[dB/km]
Mechanical Specifications			
Proof Test	--	≥9.0	[N]
		≥1.0	[%]
		≥100	[Kpsi]
Macro-bend Induced Loss	1625nm	≤0.05	[dB]
	1310nm and 1550nm	≤0.05	[dB]
	1550nm	≤0.05	[dB]
Coating Strip Force	typical average force	1.5	[N]
	peak force	1.3-8.9	[N]
Dynamic Fatigue Parameter(nd)	--	≥20	--

PACKAGE

1.Packing material: Wooden drum
2.Packing length: Standard length of cable shall be 2 km. Other cable length is also available if required by customer

CABLE MARKING AD CABLE REEL MARKIG

The cable sheath shall be marked with white characters according to customer's requirement.