

IURON

IU-ODN-CAB-FIG8-012-Mini-4KM

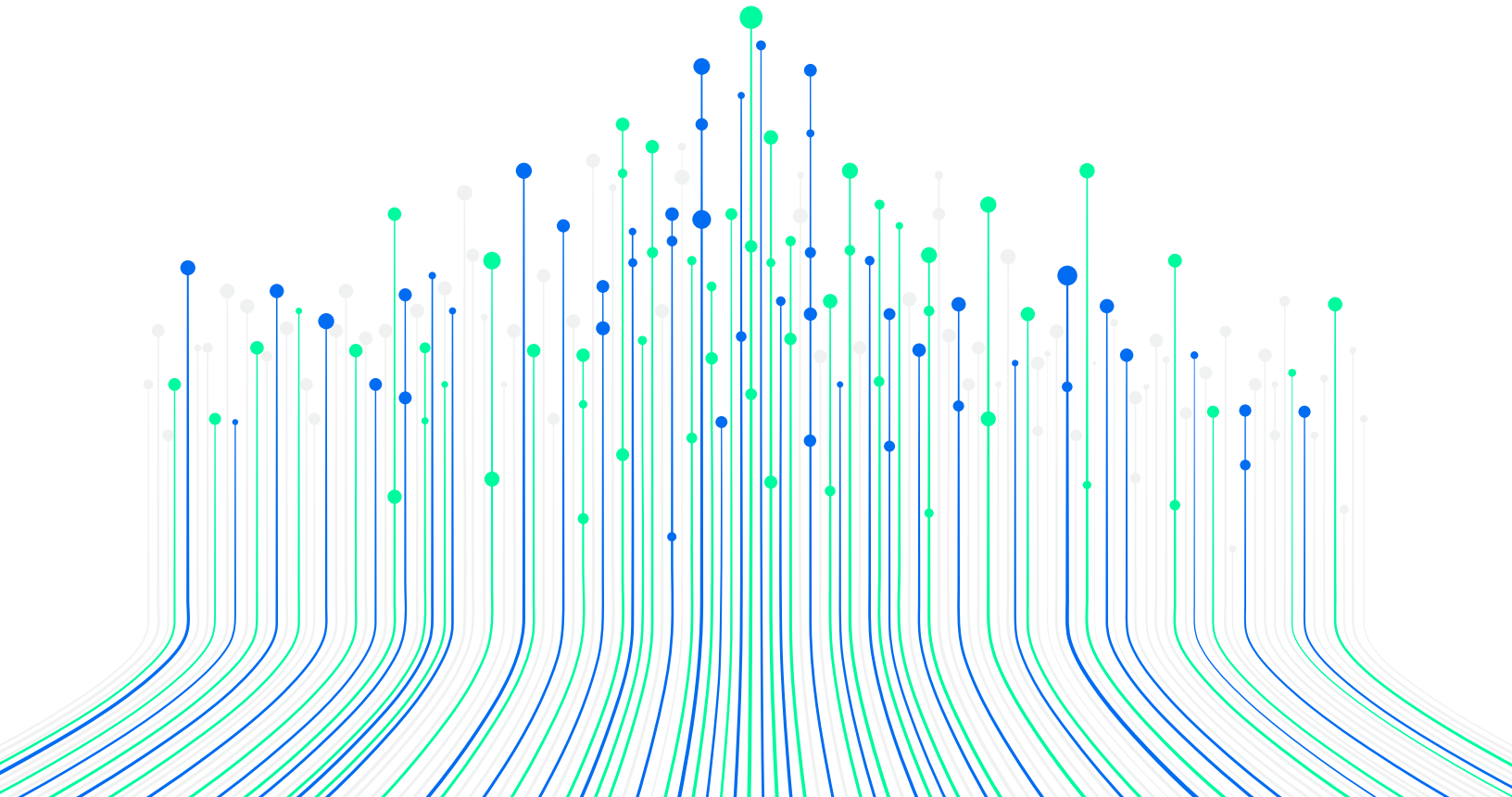
DESCRIPTION

The fibers, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. Kevlar inside outer jacket.

This part of cable companied with the wires as the supporting part are completed with PE sheath to be figure 8 structure.

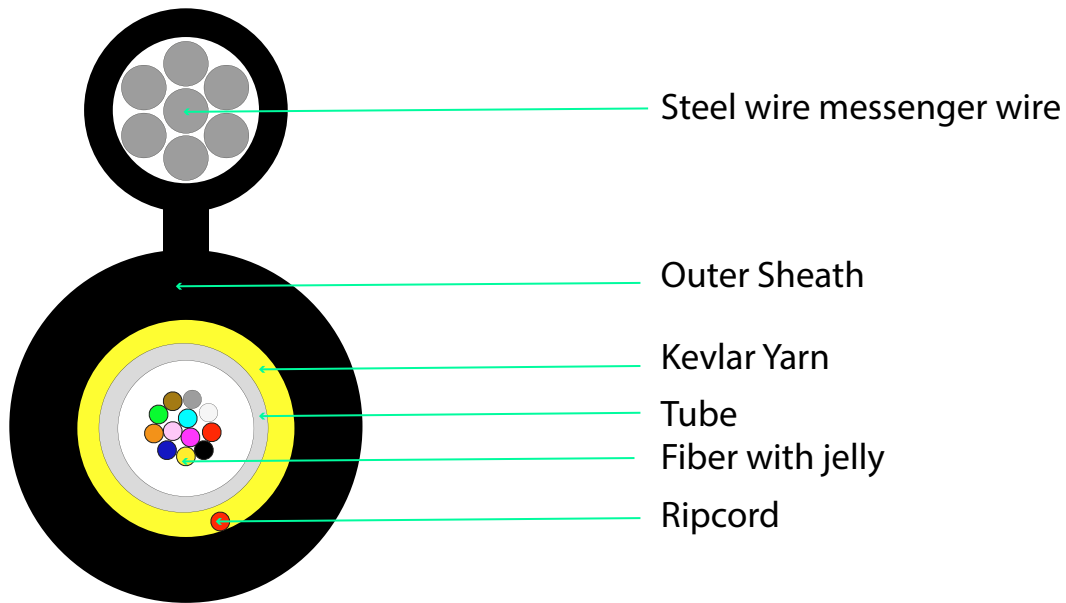
APPLICATION

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



FEATURES

- ✔ Proven loose tube design for good performance
- ✔ Excellent mechanical and environmental characteristics
- ✔ Good flexibility and bending performance
- ✔ Small outer diameter, light weight easy to installation



CABLE CONSTRUCTION DETAILS

| | | |
|-------------------------------|--------------------------|-------------|
| Number of fiber | 12 core | |
| Loose tube | Material | PBT |
| | Diameter | 2.8mm±0.2mm |
| Messenger wire | Material | Steel wire |
| | Diameter | 0.8mm*7 |
| Cable Outer Sheath | Material | PE |
| | Color | Black |
| Overall cable diameter | 4.8 (±0.1) -6.5 (±0.1)mm | |
| Cable weight per km | 48kg/km±5kg | |

FIBER COLOR

| | | | | | | |
|-----------------------------------|------|--------|--------|--------|------|-------|
| Number of fiber per tube 12 cores | 1 | 2 | 3 | 4 | 5 | 6 |
| | Blue | Orange | Green | Brown | Grey | White |
| | 7 | 8 | 9 | 10 | 11 | 12 |
| | Red | Black | Yellow | Violet | Pink | Aqua |

CABLE MECHANICAL CHARACTERISTIC

| Core | Cable diameter | Weight |
|------------------------------------|--------------------------|-------------|
| 12 | 4.8 (±0.1) -6.5 (±0.1)mm | 48kg/km±5kg |
| 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 | 1500N |
| Max allowable | Short term | 3000N |
| 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/(nm ² .km)] |
| Typical Value | -- | 0,086 | [ps/(nm ² .km)] |
| PMD | -- | ≤0.1 | ps/√km |
| | -- | ≤0.06 | ps/√km |
| | -- | 0,04 | ps/√km |
| Cable Cutoff Wavelength (λ_{cc}) | -- | ≤1260 | [nm] |
| Mode Field Diameter (MFD) | 1310nm | 8.7-9.5 | [nm] |
| | 1550nm | 9.8-10.8 | [nm] |
| Effective Group Index Refraction (N_{eff}) | 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.

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