

# FIBER OPTIC CABLE PRODUCT

MINI ARSS FIBER OPTIC CABLE

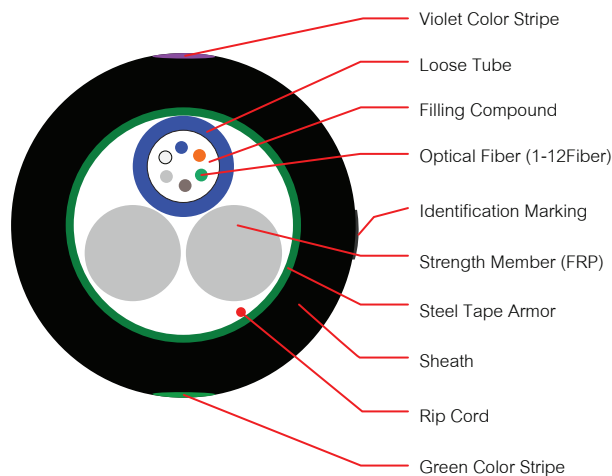


## GENERAL

- The specification covers the construction and properties of optical fiber cable.
- The cable shall be used for aerial installed-Anti Rodent type.(Span 40 meter).
- The cable generally meets any latest relevant IEC, ITU-T Recommendation or better.
- The single mode fiber shall operate in 1310nm and 1550nm.

## STANDARD

TIA/EIA-598-C (Rev. TIA/EIA-598-A), EIA-359-A, ANSI/TIA-568.3-D, ANSI/TIA-568-C.3, ANSI/ICEA 640, Telcordia (Bellcore) GR-20-CORE, ITU-T G.652D (Singlemode), ITU-T G.651 (Multimode), ITU-TG 657A2, ISO/IEC 11801:2011, ISO/IEC 11801:2017, IEC 60793, IEC 60794-1-2, EN 50173-1, TIS 2166, RoHS Compliant



## FIBER AND LOOSE TUBE IDENTIFICATION

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

## COLOR CODE FOR TUBES.

|          |      |
|----------|------|
| Tube No. | 1    |
| Color    | Blue |

## MAIN MECHANICAL & ENVIRONMENTAL PERFORMANCE

| Item                  | Contents                 | Value                       |
|-----------------------|--------------------------|-----------------------------|
| Max. tensile load     | Max allowable tension    | 3600 N fiber strain ≤ 0.33% |
| Max. crush resistance | Short term               | 1000 N/100mm                |
| Min. bending radius   | Long term                | 20x cable diameter          |
|                       | Operation                | 12.5x cable diameter        |
| Temperature range     | Operation                | -40°C~+70°C                 |
|                       | Installation             | -40°C~+70°C                 |
|                       | Storage / transportation | -40°C~+75°C                 |

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## CABLE STRUCTURE AND PARAMETER

| Item                       | Contents         | Unit  | Value   |      |           |           |      |           |                              |      |           |
|----------------------------|------------------|-------|---|------|-----------|-----------|------|-----------|------------------------------|------|-----------|
| Fiber count                | Number           | /     | 12/24   | 48   | 96        | 12/24     | 48   | 96        | 12/24                        | 48   | 96        |
| Fiber type                 | /                | /     | G652D   |      |           |           |      |           |                              |      |           |
| Cable structure            | /                | /     | 1+5   | 1+5  | 1+8       | 1+5       | 1+5  | 1+8       | 1+5                          | 1+5  | 1+8       |
| Fibers per tube            | Counts           | /     | 6   | 12   | 12        | 6         | 12   | 12        | 6                            | 12   | 12        |
| Fibers color               | /                | /     | Blue, orange, green, brown, gray, white, red, black, Yellow, Violet, Pink, Aqua |      |           |           |      |           |                              |      |           |
| Loose tube                 | Material         | /     | PBT   |      |           |           |      |           |                              |      |           |
|                            | Nominal Diameter | mm    | 1.8   | 2.1  | 2.1       | 1.8       | 2.1  | 2.1       | 1.8                          | 2.1  | 2.1       |
|                            | Color            | /     | Blue, orange, green, brown, gray, white, red, black, Yellow, Violet, Pink, Aqua |      |           |           |      |           |                              |      |           |
| Central strength member    | Material         | /     | FRP & PE cushion layer  |      |           |           |      |           |                              |      |           |
|                            | Nominal Diameter | mm    | 1.5   | 1.6  | 2.6       | 1.5       | 1.6  | 2.6       | 1.5                          | 1.6  | 2.6       |
|                            | PE cushion       | mm    | -   | -    | 3.4 ± 0.2 | -         | -    | 3.4 ± 0.2 | -                            | -    | 3.4 ± 0.2 |
| Water blocking             | Material         |       | Water blocking tape & yarn  |      |           |           |      |           |                              |      |           |
| Peripheral strength member | Material         |       | Aramid yarn & Corrugated steel tape   |      |           |           |      |           |                              |      |           |
| Outer Sheath               | Material         |       | HDPE  |      |           | LSZH      |      |           | HDPE (With Rodent Repellent) |      |           |
|                            | Color            |       |   |      |           | Black     |      |           |                              |      |           |
|                            | Thickness        | mm    |   |      |           | 1.5 ± 0.2 |      |           |                              |      |           |
| Attenuation (after cable)  | 1310nm           | dB/km | ≤ 0.36  |      |           |           |      |           |                              |      |           |
|                            | 1550nm           | dB/km | ≤ 0.22  |      |           |           |      |           |                              |      |           |
| Cable diameter             | ±5%              | mm    | 12.4  | 13.1 | 14.9      | 12.4      | 13.1 | 14.9      | 12.4                         | 13.1 | 14.9      |
| Cable weight               | ±10%             | kg/km | 133   | 146  | 189       | 165       | 180  | 228       | 133                          | 146  | 189       |
| Wind speed                 | /                | Km/h  | 126   |      |           |           |      |           |                              |      |           |

## OPTICAL FIBER

| Item                                 | Unit   | Specification |             |
|--------------------------------------|--------|---------------|-------------|
| Mode field diameter                  | 1310nm | μm            | 9.2 ± 0.6   |
|                                      | 1550nm | μm            | 10.4 ± 0.8  |
| Cladding diameter                    |        | μm            | 125.0 ± 1.0 |
| Cladding non-circularity             |        | %             | ≤1.0        |
| Core concentricity error             |        | μm            | ≤0.6        |
| Coating diameter                     |        | μm            | 242 ± 7     |
| Coating/cladding concentricity error |        | μm            | ≤12         |
| Cable cut-off wavelength             |        | nm            | ≤1260       |
| Attenuation                          | 1310nm | dB/km         | ≤0.35       |
|                                      | 1550nm | dB/km         | ≤0.21       |

## ORDER INFORMATION

F-MN - ARSS9 - XX - XX - DJ

{ H = HDPE  
 LZ = LSZH

| 12  
 | 24  
 | 48  
 | 96

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