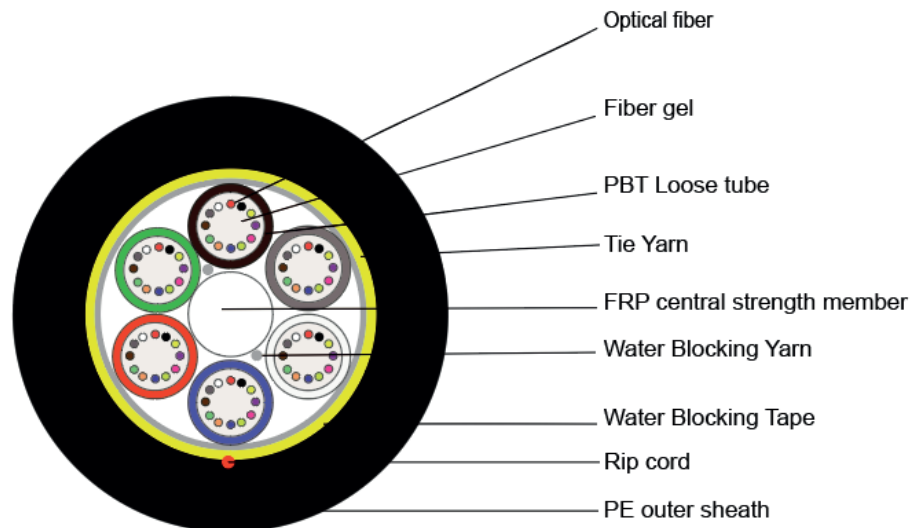


# All Dielectric Self-Supporting SM PE Jacket [ADSS]



## 1. Cable Construction

### 1.1 Cross Sectional Diagram



## Technical Specification

| Fiber Counts                | 12                       | 48   |
|-----------------------------|--------------------------|------|
| Span                        | 80m                      |      |
| OD of Loose Tube (mm)       | 2                        | 2.0  |
| Max Fiber Counts/tube       | 6                        | 12   |
| FRP                         | 2.0                      | 2.1  |
| Water Blocking Material     | Water Blocking Tape/Yarn |      |
| Outer Sheath Thickness      | 1.6 mm $\pm$ 0.1 mm      |      |
| Outer Sheath Material       | Black PE                 |      |
| OD of Cable                 | 9.2                      | 10.0 |
| Net weight ( kg/km)         | 60                       | 75   |
| Rated Tensile Strength      | 3600N                    |      |
| Tensile strength (N)        | 2500N                    |      |
| Operating temperature       | - 40 ~+70                |      |
| Store/Transport temperature | - 30 ~+70                |      |
| Installation temperature    | - 20 ~+60                |      |

### 3. Fiber and Loose buffer tube Identification

#### 4. Optical Fiber 1

|             |      |        |       |       |      |         |     |       |        |        |      |      |
|-------------|------|--------|-------|-------|------|---------|-----|-------|--------|--------|------|------|
| NO.         | 1    | 2      | 3     | 4     | 5    | 6       | 7   | 8     | 9      | 10     | 11   | 12   |
| Tube Color  | Blue | Orange | Green | Brown | Grey | White   | Red | Black | Yellow | Violet | Pink | Aqua |
| NO.         | 1    | 2      | 3     | 4     | 5    | 6       | 7   | 8     | 9      | 10     | 11   | 12   |
| Fiber Color | Blue | Orange | Green | Brown | Grey | natural | Red | Black | Yellow | Violet | Pink | Aqua |

| Items       | Units | Specification                    |
|-------------|-------|----------------------------------|
| Fiber Type  | -     | G652D                            |
| Attenuation | dB/km | 1310 nm ≤ 0.36<br>1550 nm ≤ 0.22 |

|                                          |                        |                                               |
|------------------------------------------|------------------------|-----------------------------------------------|
| Chromatic Dispersion                     | ps/nm.km               | 1310 nm ≤ 3.5<br>1550 nm ≤ 18<br>1625 nm ≤ 22 |
| Zero Dispersion Slope                    | ps/nm <sup>2</sup> .km | 0.092                                         |
| Zero Dispersion Wavelength               | nm                     | 1300 ~ 1324                                   |
| PMD (M=20, Q=0.01%)                      | ps/√km                 | ≤ 0.1                                         |
| Cut-off Wavelength (λ <sub>cc</sub> )    | nm                     | ≤ 1260                                        |
| Attenuation vs. Bending (60mm x100turns) | dB                     | ≤ 0.1 at 1625 nm                              |
| Mode Field Diameter                      | μm                     | 9.2 ± 0.4 @1310nm                             |
| Core-Clad Concentricity                  | μm                     | ≤ 0.5                                         |
| Cladding Diameter                        | μm                     | 125±1                                         |
| Cladding Non-circularity                 | %                      | ≤ 0.8                                         |
| Coating Diameter                         | μm                     | 245±5                                         |
| Proof Test                               | Gpa                    | ≥ 0.69                                        |

## 5. Mechanical and Environmental Performance of the Cable

| NO. | ITEMS                  | TEST METHOD                                                                                                                                                                                      | ACCEPTANCE CRITERIA                                                                          |
|-----|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 1   | Tensile Loading Test   | #Test method: IEC 60794-1-E1<br>-. MAT 2500N<br>-. Cable length: $\geq 50$ m                                                                                                                     | -. Attenuation increment@1550 nm: $\leq 0.15$ dB<br>-. No jacket cracking and fiber breakage |
| 2   | Crush Resistance Test  | #Test method: IEC 60794-1-E3<br>-.Long load: 1000 N/100mm<br>-.Short load: 2500 N/100mm<br>Load time:1 min of short term load, followed by 10 min of long term load                              | -. Attenuation increment@1550 nm: $\leq 0.15$ dB<br>-. No jacket cracking and fiber breakage |
| 3   | Impact Resistance Test | #Test method: IEC 60794-1-E4<br>-.Impact height: 1 m<br>-.Impact energy: 10 J with striking surface radius of 300 mm<br>-.Impact point: $\geq 5$<br>-.Impact frequency: $\geq 3$ /point          | -. Attenuation increment@1550 nm: $\leq 0.15$ dB<br>-. No jacket cracking and fiber breakage |
| 4   | Repeated Bending       | #Test method: IEC 60794-1-E6<br>-.Mandrel diameter: 20 D (D = cable diameter)<br>-.Bent backwards and forwards through angles: 180°<br>-.Bending frequency: 25 times<br>-.Bending speed: 2s/time | -. Attenuation increment@1550 nm: $\leq 0.15$ dB<br>-. No jacket cracking and fiber breakage |
| 5   | Torsion Test           | #Test method: IEC 60794-1-E7<br>-.Length: 2 m<br>-.Tension : 50 N<br>-.Angle: $\pm 180$ degree                                                                                                   | -. Attenuation increment@1550 nm: $\leq 0.15$ dB<br>-. No jacket cracking and fiber breakage |

|   |                          |                                                                                                                                     |                                                                                              |
|---|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|   |                          | -.Frequency: $\geq 10/\text{point}$                                                                                                 |                                                                                              |
| 6 | Water Penetration Test   | #Test method: IEC 60794-1-F5B<br>-.Height of pressure head: 1 m<br>-.Length of specimen: 3 m<br>-.Test time: 24 hours               | -. No leakage through the open cable end                                                     |
| 7 | Temperature Cycling Test | #Test method: IEC 60794-1-F1<br>-.Temperature steps: + 20 、 - 40 、 + 70 、 + 20<br>-.Testing Time: 24 hours/step<br>-.Cycle index: 2 | -. Attenuation increment@1550 nm: $\leq 0.15$ dB<br>-. No jacket cracking and fiber breakage |
| 8 | Drop Performance         | #Test method: IEC 60794-1-E14<br>-.Testing length: 30 cm<br>-.Temperature range: $70 \pm 2$<br>-.Testing Time: 24 hours             | -. No filling compound drop out                                                              |

## 5.2 Fiber Optical Cable bending radius

Static bending:  $\geq 12.5$  times than cable out diameter

Dynamic bending:  $\geq 25$  times than cable out diameter.

## 6. Reference Standard

ITU-T G.652 : Characteristics of a single-mode optical fibre and cable

IEC 60794-4-2018--Optical fibre cables. Sectional specification. Aerial op.

## 7. Package and Mark

### 7.1 Package

Not allowed two length units of cable in one drum, two ends should be sealed, Two ends should be packed inside drum, reserve length of cable not less than 3 meters.

4km/roll Fumigated Wooden Drum

### 7.2 Mark

According to customer requirements