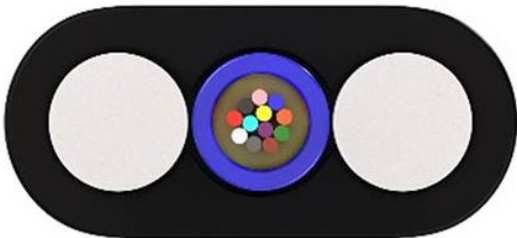


# Outdoor FTTx cable Flat ADSS-12FO

## 1. Cable Design



## 2. Cable Structure & Parameters

|                              |                       |              |
|------------------------------|-----------------------|--------------|
| Count of fibers              |                       | 12           |
| Fiber type                   |                       | G.652D       |
| Gel-filled<br>Loose Tube     | Material              | PBT          |
|                              | Diameter (±0.06) mm   | 2.0          |
| No. of fibers per Loose Tube |                       | 12           |
| Strength<br>Member           | Material              | FRP          |
|                              | Diameter (±0.05) mm   | 1.5          |
|                              | No.                   | 2pcs         |
| Outer Sheath                 | Material              | HDPE         |
| Cable Diameter (±0.2) mm     |                       | 7.8 x 3.8mm  |
| Cable Weight (±2) kg         |                       | 33           |
| Min.bending<br>radius        | Without Tension       | 10× Cable- ϕ |
|                              | Under Maximum Tension | 20× Cable- ϕ |
| Temperature<br>range<br>(℃)  | Installation          | -20~+60      |
|                              | Transport&Storage     | -20~+70      |
|                              | Operation             | -20~+70      |

## 3. Application:

| NO. | Item                          |            | Requirement  |
|-----|-------------------------------|------------|--------------|
| 1   | Allowable Tensile<br>Strength | Short Term | 1500N        |
|     |                               | Long Term  | 500N         |
| 2   | Allowable Crush<br>Resistance | Short Term | 800 (/100mm) |
|     |                               | Long Term  | 300 (/100mm) |

#### 4. Fiber & Tube Colors

|       |      |        |        |        |      |       |
|-------|------|--------|--------|--------|------|-------|
| No.   | 1    | 2      | 3      | 4      | 5    | 6     |
| Color | Blue | Orange | Green  | Brown  | Gray | White |
| No.   | 7    | 8      | 9      | 10     | 11   | 12    |
| Color | Red  |        | Yellow | Violet | Pink | Aqua  |

#### 5. The properties of single mode optical fiber (ITU-T Rec. G.652.D)

| Item                                                                                   | Specification                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Fiber type                                                                             | Single mode                                                                                        |
| Fiber material                                                                         | Doped silica                                                                                       |
| Attenuation coefficient<br>@ 1310 nm<br>@ 1383 nm<br>@ 1550 nm<br>@ 1625 nm            | $\leq 0.36$ dB/km<br>$\leq 0.32$ dB/km<br>$\leq 0.22$ dB/km<br>$\leq 0.30$ dB/km                   |
| Point discontinuity                                                                    | $\leq 0.05$ dB                                                                                     |
| Cable cut-off wavelength                                                               | $\leq 1260$ nm                                                                                     |
| Zero-dispersion wavelength                                                             | 1300 ~ 1324 nm                                                                                     |
| Zero-dispersion slope                                                                  | $\leq 0.092$ ps/(nm <sup>2</sup> .km)                                                              |
| Chromatic dispersion<br>@ 1288 ~ 1339 nm<br>@ 1271 ~ 1360 nm<br>@ 1550 nm<br>@ 1625 nm | $\leq 3.5$ ps/(nm. km)<br>$\leq 5.3$ ps/(nm. km)<br>$\leq 18$ ps/(nm. km)<br>$\leq 22$ ps/(nm. km) |
| PMD <sub>Q</sub> (Quadrature average*)                                                 | $\leq 0.2$ ps/km <sup>1/2</sup>                                                                    |
| Mode field diameter @ 1310 nm                                                          | 9.2±0.4 μm                                                                                         |
| Core / Clad concentricity error                                                        | $\leq 0.5$ μm                                                                                      |
| Cladding diameter                                                                      | 125.0 ± 0.7 μm                                                                                     |
| Cladding non-circularity                                                               | $\leq 1.0\%$                                                                                       |
| Primary coating diameter                                                               | 245 ± 10 μm                                                                                        |
| Proof test level                                                                       | 100 kpsi (=0.69 Gpa), 1%                                                                           |
| Temperature dependence<br>0oC~ +70oC @ 1310 & 1550nm                                   | $\leq 0.1$ dB/km                                                                                   |

## 6. Main mechanical & environmental performance test

| Item                                             | Test Method                                                                                                | Acceptance Condition                                                                                                   |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Tensile Strength<br>IEC 794-1-2-E1               | - Load: Short term tension<br>- Length of cable: about 50m                                                 | - Fiber strain $\leq 0.36\%$<br>- Loss change $\leq 0.1 \text{ dB @1550 nm}$<br>- No fiber break and no sheath damage. |
| Crush Test<br>IEC 60794-1-2-E3                   | - Load: Short term crush<br>- Load time: 1min                                                              | - Loss change $\leq 0.05\text{dB@1550nm}$<br>- No fiber break and no sheath damage.                                    |
| Impact Test<br>IEC 60794-1-2-E4                  | - Points of impact: 3<br>- Times of per point: 1<br>- Impact energy: 5J                                    | - Loss change $\leq 0.1\text{dB@1550nm}$<br>- No fiber break and no sheath damage.                                     |
| Temperature Cycling Test<br>YD/T901-2001-4.4.4.1 | - Temperature step:<br>+20°C→-40°C→+70°C<br>→+20°C<br>- Time per each step: 12 hrs<br>- Number of cycle: 2 | - Loss change $\leq 0.05 \text{ dB/km@1550 nm}$<br>- No fiber break and no sheath damage.                              |

## 7. Package and marking

Package 2km/drum or any length customer required.

Cable Mark:According to customer's requirements.

Drum Mark: According to customer's requirements.

Test Report Test report and certification supplied.

