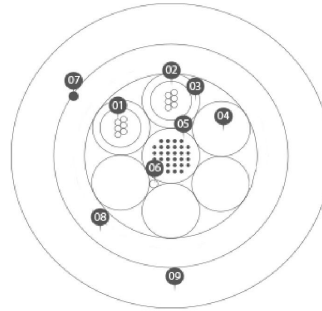


# ADSS Fiber Optic Cable

All-Dielectric Self-Supporting (Indoor/Outdoor)



- 01. Optical Fiber
- 02. Inner Jelly
- 03. Loose Tube
- 04. Filler
- 05. Central Strength
- 06. Member Water Blocking Yarn
- 07. Rip Cord
- 08. Water Blocking Tape & Blinder/warpping
- 09. HDPE Outer Sheath



## Application

ADSS are All-Dielectric self supporting cable and single jacket designed for aerial **or duct** installation. The optical fiber cable(ADSS) design provides no supporting part or messenger wire required. Cable provides for hardware part for installation with ADSS cable supporting on the pole. The cable inside multi-loose tube filled with a water resistant filling compound or design for waterblocked with water blocking material in side cable. The cable high tensile by aramid yarns and FRP strength member rod inside. Outer sheath made from HDPE. It's can be customized by adding FRP armor for rodent protection.

It supports application such as 40/100Gbps Ethernet, IEEE802.3ae, 10G Ethernet, IEEE802.3z, Gigabit Ethernet, Fast Ethernet, IEEE 802.3 Ethernet, 100BASE-F, 52/155/622Mbps and 1.2Gbps ATM, FDDI, Fiber channel and others.

## Standard

|                                 |                             |
|---------------------------------|-----------------------------|
| ANSI/TIA-568.3-D                | ISO/IEC 11801:2011 (Ed.2.2) |
| ANSI/TIA-568-C.3                | ISO/IEC 11801:2017          |
| ANSI/ICEA 640                   | IEC 60793                   |
| IEEE P-1222                     | IEC 60794-1-2               |
| Telcordia (Bellcore) GR-20-CORE | EN 50173-1                  |
| ITU-T G.652D (Singlemode)       | TIS 2166-2548               |
| ITU-T G.651 (Multimode)         | RoHS Compliant              |

## Specification

| Cable Type                 |                           | ADSS                                        |
|----------------------------|---------------------------|---------------------------------------------|
| Number of Fibers           |                           | 6-24                                        |
| Fiber                      | Construction              | Consult 3.1                                 |
| Central Strength Member    | Material                  | FRP (Fiberglass Reinforce with Plastic)     |
| Water Blocking Member      | Material                  | Water Blocking Tape and Water Blocking Yarn |
| Loose Tube                 | Material                  | PBT (Polybutylene Terephthalate)            |
|                            | Filling Compound Material | Thixotropic Jelly Compound                  |
| Filler                     | Material                  | Polypropylene (PP)                          |
| Additional Strength Member | Material                  | Aramid Yarns                                |
| Ripcord                    | no.                       | 1                                           |
|                            | Material                  | Polyester                                   |
| Thickness                  | Material                  | HDPE(Black) with Rodent Repellent           |
|                            | Outer Sheath              | 1.2 mm                                      |

# ADSS Fiber Optic Cable

All-Dielectric Self-Supporting

## Construction Specification

### Buffer Tube Stranding

| Fiber count | Fiber number per tube | Number of tube / filler | Diameter (mm) | Approx. Weight (Kg/km) |
|-------------|-----------------------|-------------------------|---------------|------------------------|
| 6-24        | 6                     | 4/1                     | 9.2±1         | 60±10                  |

### Identification

Color Code for Fibers and Tubes TIA/EIA-598-C (Rev.TIA/EIA-598-A).

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

## Optical Fiber in the Cable

### Construction

|                                      |          |                                                             |
|--------------------------------------|----------|-------------------------------------------------------------|
| Fiber                                | Type     | Single mode type ITU-T G.652.D                              |
|                                      | Material | Ge doped fused silica                                       |
| Mode field diameter                  | 1310 nm  | 9.2±0.4 μm                                                  |
| Core / Cladding concentricity error  |          | ≤0.5 μm                                                     |
| Coating/Cladding Concentricity error |          | ≤12 μm                                                      |
| Cladding diameter                    |          | 125±1 μm                                                    |
| Cladding non-circularity             |          | ≤0.7%                                                       |
| Coating                              | Material | UV curable acrylate                                         |
|                                      | Diameter | 245±5 μm(Primary/Uncolored)<br>250±15 μm(Secondary/Colored) |
| Fiber proof-tested Stress            |          | 0.69 GPa ( 1.0%, 100kpsi)                                   |
| Group refractive index               |          | 1.4676 (1310nm)<br>1.4682 (1550nm)                          |

### Optical characteristics

|                                             |         |                                 |
|---------------------------------------------|---------|---------------------------------|
| Attenuation (Max./Typ.)                     | @1310nm | ≤ 0.35 / ≤ 0.33 dB/km           |
|                                             | @1380nm | ≤ 0.35 / ≤ 0.31 dB/km           |
|                                             | @1550nm | ≤ 0.21 / ≤ 0.19 dB/km           |
|                                             | @1625nm | ≤ 0.23 / ≤ 0.20 dB/km           |
| Zero-dispersion Wavelength                  |         | 1300~1324 nm                    |
| Zero-dispersion slope                       |         | ≤ 0.092ps/(nm <sup>2</sup> /km) |
| Chromatic Dispersion Coefficient            | 1310 nm | ≤ 3.5 ps/(nm.km)                |
|                                             | 1550 nm | ≤ 18.0 ps/(nm.km)               |
| Cable Cut-off Wavelength (λ <sub>cc</sub> ) |         | ≤ 1260nm with EIA/TIA-455-170   |
| Polarization Mode Dispersion(PMD)           |         | ≤ 0.2 ps/km <sup>1/2</sup>      |

# ADSS Fiber Optic Cable

## All-Dielectric Self-Supporting

### Cable sheath Marking

The length and identification marking are printed (hot stamp) on the sheath at every one meter interval in white color. The accuracy of the length marking shall be  $\pm 1.0\%$ . The contents of sheath marking as customer's requirement.

### Physical Specification

| Item                     | Value                                    |
|--------------------------|------------------------------------------|
| Max span length          | 40 - 100 m                               |
| Operation temperature    | -40 ~ +70 C                              |
| Storage temperature      | -40 ~ +75 C                              |
| Static bending radius    | 10 x cable OD                            |
| Dynamic bending radius   | 20 x cable OD                            |
| Maximum Wind Velocity    | 126 km/h                                 |
| Max. Tensile load        | 1,800N (Installation) 1,000N (Operation) |
| Maximum Crush resistance | 2,200N / 10cm                            |

### Standard

|                             |                                       |
|-----------------------------|---------------------------------------|
| Tensile loading Test        | TIA/EIA-455-33A and IEC 60794-1-2-E1A |
| Compression Test            | TIA/EIA-455-41A and IEC 60794-1-2-E3  |
| Repeated Bending Test       | TIA/EIA-455-104A and IEC 60794-1-2-E6 |
| Impact Test                 | TIA/EIA-455-25B and IEC 60794-1-2-E4  |
| Cable Bending Test          | IEC 60794-1-2-E11B                    |
| Cable Twist or Torsion Test | TIA/EIA-455-85A and IEC 60794-1-2-E7  |
| Temperature Cycling Test    | TIA/EIA-455-3A and IEC 60794-1-2-F1   |
| Water Penetration Test      | TIA/EIA-455-82B and IEC 60794-1-2-F5  |

### Ordering Information

| No. of core | Description                                                                     |
|-------------|---------------------------------------------------------------------------------|
| 6           | FC-SG-ADSS06, 6C ADSS, Multi Loose Tube, Single Jacket, SM 9/125 $\mu\text{m}$  |
| 12          | FC-SG-ADSS12, 12C ADSS, Multi Loose Tube, Single Jacket, SM 9/125 $\mu\text{m}$ |
| 24          | FC-SG-ADSS24, 24C ADSS, Multi Loose Tube, Single Jacket, SM 9/125 $\mu\text{m}$ |