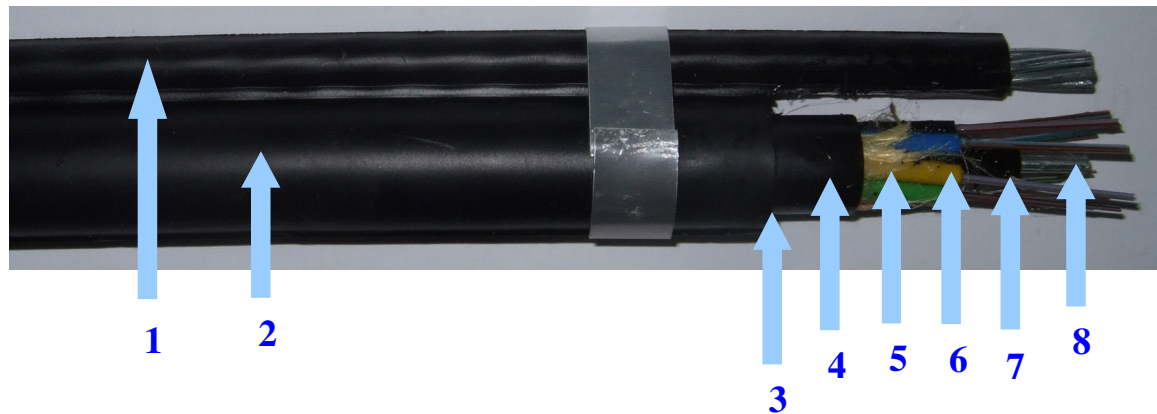


## Figure 8 Aerial Fiber Optic Cables

**Application :** Primarily for carrier-class fixed line, mobile communications networks, CATV fiber-optic backbone network, used for the core and aggregation network and access network for base stations connected. Figure 8 Aerial Self Support cables are designed suitably for Outdoor UV/harsh outdoor environment protection between buildings short, medium span aerial installations.

**Construction :**



- ❶ Suspension strand: 7 galvanized steel wires with PE covered
- ❷ Outer sheath
- ❸ Ripcord & waterblocking element
- ❹ Inner sheath
- ❺ Peripheral strength element-Aramid yarn
- ❻ Loose tube
- ❼ Colour fibers
- ❽ Center strength member(CSM)- Galvanized steel wire with oversheath

**Features and Benefits :**

- ◆ CSM: Galvanized steel wire with oversheath could provide efficient tension for cable.
- ◆ Loose Tube: 6 or 12 fiber per loose tube and filled with a suitable jelly compound.
- ◆ Filler: Thermoplastic rods, where needed.
- ◆ Stranding: Loose tubes (and filler), SZ stranded around the CSM.
- ◆ Longitudinal water tightness : The core is water blocked using jelly.
- ◆ Peripheral Strength Element: Aramid yarns.
- ◆ Inner Sheath: Only for double sheath. (Option)
- ◆ Water Blocking Element: Only for double sheath, between outer & inner sheath. (Option)
- ◆ Ripcord: Nylon thread or Aramid yarn for the sheath can be easily strip.
- ◆ Outer Sheath: (Option)
  - LAP sheath: Laminated Aluminum sheath for moisture berry.
  - PE sheath

**Specification :** 6C~96C , Detail specification

## 1. Configuration

| No. of Fibers             | Unit  | 6         | 12  | 18  | 24  | 36  | 48            | 72            | 96            |
|---------------------------|-------|-----------|-----|-----|-----|-----|---------------|---------------|---------------|
| Tubes xFibers             | NO.xC | 1×6       | 2×6 | 3×6 | 4×6 | 6×6 | 8×6           | 6×12          | 8×12          |
| Loose Tube/Filler- $\phi$ | mm    | 2.5       |     |     |     |     | 3.1           |               |               |
| CSM- $\phi$               | mm    | 2.0       |     |     |     |     | 2.3           | 2.6           |               |
| CSM-Over sheath- $\phi$   | mm    | 2.7       |     |     |     |     | 4.2           | 3.3           | 5.5           |
| Inner Sheath              | mm    | 1.0       |     |     |     |     |               |               |               |
| LAP Outer sheath          | mm    | 1.7       |     |     |     |     |               |               |               |
| Self-support- $\phi$      | NO/mm | 7/1.8     |     |     |     |     |               | 7/2.0         |               |
| Cable Diameter (H×W)      | mm    | 24.2×14.8 |     |     |     |     | 25.7×<br>16.3 | 24.1×<br>17.1 | 30.5×<br>20.5 |
| Cable weight(App.)        | kg/m  | 0.35      |     |     |     |     | 0.38          | 0.39          | 0.43          |

## 2. Application

| Temperature Range                                                               | Minimum Bending Radius                                                        |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Transportation&Storage: -30~+60℃<br>Installation: 0~+60℃<br>Operation: -30~+60℃ | Under Maximum Tension : 20×Cable- $\phi$<br>Without Tension: 10×Cable- $\phi$ |

### 3. Mechanical and Environmental Characteristics :

| Test                                | Test Standard                        | Specified Value                                                                                                                 | Acceptance Criteria                                                                  |
|-------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Tensile Loading and Bending Test    | EIA-455-33A                          | Mandrel diameter: 20D (D = cable diameter)<br>Tensile load: 273kgf for 10 minutes                                               | (1) Attenuation Increment $\leq 0.2$ dB<br>(2) No jacket cracking and fiber breakage |
| Cyclic Flexing Test                 | TIA/EIA-455-104A                     | Sheave diameter: 20D (D=cable diameter)<br>No. of flexing cycles: 25 cycles<br>Flexing speed: 30 cycles/minute                  |                                                                                      |
| Repeated Impact Test                | TIA/EIA-455-25B                      | Height of impact: 150mm<br>No. of impact cycles: 20 cycles<br>Cycle speed: 30 $\pm$ 1 cycle/min.                                |                                                                                      |
| Cable Twist Test                    | TIA/EIA-455-85A                      | Cable length twisted: 4m<br>No. of twist cycles: 10 cycles for 10 min.<br>Twist angle: $\pm 180^\circ$ /cycle                   |                                                                                      |
| Compressive Loading Resistance Test | TIA/EIA-455-41A                      | Applied load: 4.54kgf/mm<br>Duration of loading: 10 minutes<br>Load length: more than 100 mm<br>Compressive speed: 2.54 mm/min. |                                                                                      |
| Water Penetration                   | TIA/EIA-455-82B/<br>IEC 60794-1-2F5B | Length of specimen: 1m<br>Height of pressure head: 1m<br>Test time: 4 hours                                                     | No leakage through the open cable end                                                |

This section shall be performed at 1550nm.

#### 4. Optical Characteristics

##### 4.1 Maximum Attenuation

| Wavelength        | Attenuation(dB/km)                      |
|-------------------|-----------------------------------------|
| 1260nm            | $\leq 0.45$                             |
| 1310nm            | $\leq 0.40$                             |
| 1383nm $\pm 3$ nm | $\leq 0.35$                             |
| 1550nm            | $\leq 0.25$ (90%)<br>$\leq 0.30$ (100%) |
| 1625nm            | $\leq 0.35$                             |

##### 4.2 Chromatic Dispersion

| Wavelength | Specification (ps/km-nm) |
|------------|--------------------------|
| 1260nm     | $\leq 6.21$              |
| 1310nm     | $\leq 1.14$              |
| 1383nm     | $\leq 7.05$              |
| 1550nm     | $\leq 18.21$             |
| 1625nm     | $\leq 22.31$             |

##### 4.3 Polarization Mode Dispersion , PMD

|                                                                                                               |                             |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|
| Individual Polarization Mode Dispersion                                                                       | 0.2 ps / $\sqrt{\text{km}}$ |
| Linked Polarization Mode Dispersion , PMD <sub>Q</sub><br>20 Cables(M=20)<br>0.01% Probability level(Q=0.01%) | 0.1ps / $\sqrt{\text{km}}$  |

##### 4.4 Cut-off Wavelength of Cabled : Less than 1260nm °

##### 4.5 Mode Field Diameter

|        |                                            |
|--------|--------------------------------------------|
| 1310nm | 9.0~9.4 $\mu\text{m} \pm 0.4\mu\text{m}$   |
| 1550nm | 10.0~10.7 $\mu\text{m} \pm 0.7\mu\text{m}$ |

## 5. Identification

### 5.1 Fiber Colours

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

### 5.2 Loose Tube Colours

|           |      |        |       |     |        |       |       |       |
|-----------|------|--------|-------|-----|--------|-------|-------|-------|
| Fiber No. | 1    | 2      | 3     | 4   | 5      | 6     | 7     | 8     |
| Colour    | Blue | Yellow | Green | Red | Violet | White | Brown | Black |

### 5.3 Sheath Colour: Black

### 5.4 Sheath Marking

**PACIFIC 《year of manufacture》《Cable type and fiber count》《length marking in meter》**

## 6. Packing

Metal or Wooden drums with protection.

## 7. Delivery Lengths

Standard delivery length are 2000 meters.