

# Shenzhen UnitekFiber Solution Limited

## Fiber Optic Patch Cable FTTA Waterproof FullAXS DLC-DLC SM G657A1 5.0MM Outdoor Fiber Patch Cord

UnitekFiber provides waterproof Supertap fiber patch cord which provides superior weather resistance for FTTA and other outdoor applications. It ensures functionality in harsh weather environments, can be installed without special tooling and provides bend protection for installation and long-term use.



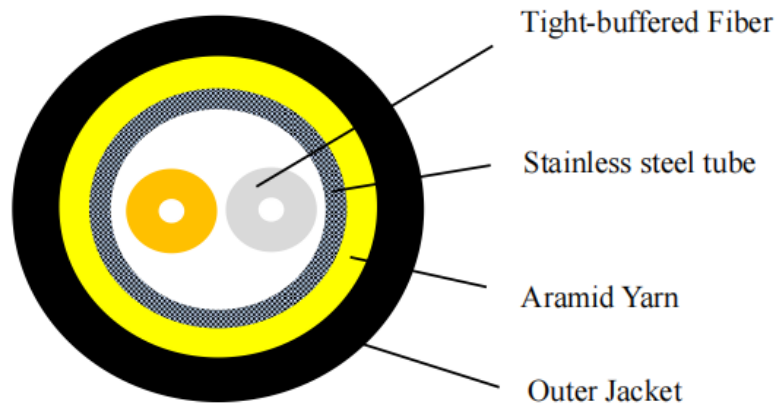
Drawings :



## Connector Technical Parameter

| Model                    |               | SM                              |
|--------------------------|---------------|---------------------------------|
| Connector A : FullAXS DL |               |                                 |
| Insertion Loss           | Standard Loss | 0.30dB                          |
| Return Loss              |               | UPC $\geq$ 50dB APC $\geq$ 60dB |
| Durability(500 Matings)  |               | $\leq$ 0.2dB                    |
| Test Wavelength          |               | 1310nm&1550nm                   |
| Connector B:Supertap LC  |               |                                 |
| Insertion Loss           | Standard Loss | 0.30dB                          |
| Return Loss              |               | UPC $\geq$ 50dB APC $\geq$ 60dB |
| Durability(500 Matings)  |               | $\leq$ 0.2dB                    |
| Test Wavelength          |               | 1310nm&1550nm                   |

## Cable Structure Diagram



## Cable Dimensions and Constructions

| Items                |           | Specifications       |
|----------------------|-----------|----------------------|
| Fiber Count          |           | 2                    |
| Tight-buffered Fiber | Dimension | 850±50μm             |
|                      | Material  | PVC                  |
|                      | Color     | White / Yellow       |
| stainless steel tube | Dimension | 2.8±0.2mm            |
|                      | Material  | Stainless steel tube |
|                      | Thickness | 0.22±0.02 mm         |
| Jacket               | Dimension | 5.0±0.2mm            |
|                      | Material  | OFNR-LSZH            |
|                      | Color     | Black                |
|                      | Thickness | 1.0±0.1mm            |

## Mechanical and Environmental Characteristics

| Items                      | Unite  | Specifications |
|----------------------------|--------|----------------|
| Tension (Long Term)        | N      | 600            |
| Tension (Short Term)       | N      | 1200           |
| Crush (Long Term)          | N/10cm | 1200           |
| Crush (Short Term)         | N/10cm | 3000           |
| Min. Bend Radius (Dynamic) | mm     | 20D            |
| Min. Bend Radius (Static)  | mm     | 10D            |
| Operating Temperature      | °C     | -40~+85        |
| Storage Temperature        | °C     | -55~+85        |

## Fiber Attenuation

The properties of single mode optical fiber (ITU-T Rec. G.657A1)

| Characteristic                                                                                                               | condition                              | data                 | unit                     |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------|--------------------------|
| Attenuation                                                                                                                  | 1310nm                                 | ≤0.35                | dB/km                    |
|                                                                                                                              | 1383nm(氢老化后)                           | ≤0.35                | dB/km                    |
|                                                                                                                              | 1490nm                                 | ≤0.23                | dB/km                    |
|                                                                                                                              | 1550nm                                 | ≤0.22                | dB/km                    |
|                                                                                                                              | 1625nm                                 | ≤0.23                | dB/km                    |
| Relative wavelength attenuation                                                                                              | 1285~1330nm                            | ≤0.05                | dB/km                    |
|                                                                                                                              | @1310nm<br>@1550nm                     | 1525~1575nm<br>≤0.05 | dB/km                    |
| Dispersion in the wavelength range of                                                                                        | 1285~1340nm                            | ≤3.5                 | ps/(nm.km)               |
|                                                                                                                              | 1550nm                                 | ≤18                  | ps/(nm.km)               |
| Zero dispersion wavelength                                                                                                   |                                        | 1300~1324            | nm                       |
| A zero-dispersion slope                                                                                                      |                                        | ≤0.092               | ps/(nm <sup>2</sup> .km) |
| Polarization Mode Dispersion<br>Coefficient PMD<br>Single fiber maximum<br>Fiber link value (M=20, Q=0.01%)<br>Typical value |                                        | ≤0.2                 | ps/                      |
|                                                                                                                              |                                        | ≤0.1                 | ps/                      |
|                                                                                                                              |                                        | 0.04                 |                          |
|                                                                                                                              |                                        |                      | ps/                      |
| Cable cut-off wavelength (λ <sub>cc</sub> )                                                                                  |                                        | ≤1260                | nm                       |
| Mode field diameter (MFD)                                                                                                    | 1310nm                                 | 8.8±0.4              | μm                       |
|                                                                                                                              | 1550nm                                 | 9.8±0.5              | μm                       |
| Attenuation discontinuities                                                                                                  | 1310nm                                 | ≤0.05                | dB                       |
|                                                                                                                              | 1550nm                                 | ≤0.05                | dB                       |
| Core diameter                                                                                                                |                                        | 125±0.7              | μm                       |
| Cladding roundness                                                                                                           |                                        | ≤0.7                 | %                        |
| Coating diameter                                                                                                             |                                        | 245±5                | μm                       |
| Coating / package concentricity error                                                                                        |                                        | ≤12.0                | μm                       |
| Core / package concentricity error                                                                                           |                                        | ≤0.5                 | μm                       |
| The warpage (radius)                                                                                                         |                                        | ≥4                   | m                        |
| <b>Environmental characteristics (1310nm、1550nm、1625nm)</b>                                                                  |                                        |                      |                          |
| Temperature additional attenuation                                                                                           | -60℃ ~+85℃                             | ≤0.05                | dB/km                    |
| Temperature-humidity cycle additional attenuation                                                                            | -10℃ ~+85℃, 98%<br>Relative humidity   | ≤0.05                | dB/km                    |
|                                                                                                                              | 23℃, 30 days                           | ≤0.05                | dB/km                    |
| Flooding additional attenuation                                                                                              | 85℃和 85% Relative<br>humidity, 30 days | ≤0.05                | dB/km                    |
| Hot and humid additional attenuation                                                                                         | 85℃                                    | ≤0.05                | dB/km                    |
| Dry heat aging                                                                                                               |                                        | ≥9.0                 | N                        |
| The macro bend Additional attenuation                                                                                        | 10 CircleΦ30mm<br>1550nm               | ≤0.025               | dB                       |
|                                                                                                                              | 10 CircleΦ30mm<br>1625nm               | ≤1.0                 | dB                       |
|                                                                                                                              | 1 CircleΦ20mm<br>1550nm                | ≤0.75                | dB                       |
|                                                                                                                              | 1 CircleΦ20mm<br>1625nm                | ≤1.5                 | dB                       |
|                                                                                                                              | Coating peeling force                  | Typical average      | 1.5                      |
| Dynamic fatigue parameters                                                                                                   |                                        | ≥20                  |                          |

## **Packing**

According to customer request.

## **Delivery Length**

Standard Reel Length:0.5-2.0 km. ; According to customer request.

## **Marking**

Cable Marker every Meter by

- Year of manufacture
- Type of Cable
- Number of fiber
- Cable length
- Etc

According to customer or our company request .