

# SPECIFICATION

## 1F MINI IP(SC)-MINI IP(SC) SM 2X5MM WATERPROOF PATCH CORD





## 1F Mini IP(SC)-Mini IP(SC) SM 2x5mm Patch cord

### Description

It's a kind of FTTH patch cord assembly with **2.0x5.0mm Aerial Flat 5.0mm FTTH Drop Cable**. It adopts lower insertion loss SC technologies, and compact cable structure, achieving fast deployment, high reliability, and durability.

This is a last cable in FTTH project. Used widely between MST, FAT, FTTX Pro -connectorized terminal box tec. With easy accessibility to the fiber and simple installation.



### Patch cord's Optical Specifications

|                       |                                               |                             |                    |
|-----------------------|-----------------------------------------------|-----------------------------|--------------------|
| Connector             | Dual-end Mini IP(SC/APC) waterproof connector | Polish                      | APC-APC            |
| Fiber Mode            | 9/125μm, G657A2                               | Jacket Color                | Black/Grey         |
| Cable OD              | 2.0x5.0±0.1mm                                 | Wavelength                  | SM:1310/1550nm     |
| Cable Structure       | Simplex                                       | Jacket Material             | LSZH               |
| Insertion loss        | ≤0.3dB                                        | Return loss                 | SM APC ≥ 60dB(min) |
| Operation Temperature | -20 ~ +70°C                                   | Install&Storage temperature | -40 ~ +70°C        |

**Remark:** The IL in the table is only refer to the IL (connector). The product IL must contain the connector IL and fiber cable IL, IL all = 2 x IL (connector) + IL (1km cable IL)/1000 x L (cable length).

### Mechanical and Environmental Characteristics

| Items                      | Unite  | Specifications | Reference      |
|----------------------------|--------|----------------|----------------|
| Span Length                | M      | 50             |                |
| Tension(Long Term)         | N      | 300            | IEC 61300-2-4  |
| Tension (Short Term)       | N      | 600            | IEC 61300-2-4  |
| Crush (Long Term)          | N/10cm | 500            | IEC 61300-2-5  |
| Crush (Short Term)         | N/10cm | 1000           | IEC 61300-2-5  |
| Min. Bend Radius (Dynamic) | mm     | 20D            |                |
| Min. Bend Radius (Static)  | mm     | 10D            |                |
| Operating Temperature      | °C     | -20~+60        | IEC 61300-2-22 |
| Storage Temperature        | °C     | -20~+60        | IEC 61300-2-22 |

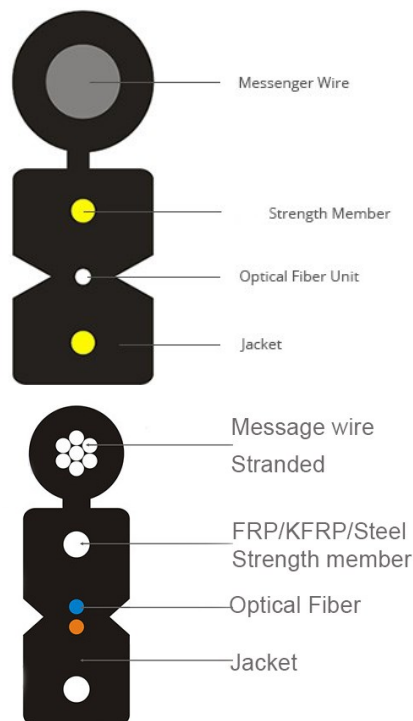
### End-Face Quality (SM)

| Zone               | Range (μm) | Scratches | Defects | Reference           |
|--------------------|------------|-----------|---------|---------------------|
| A: Core            | 0 to 25    | None      | None    | IEC 61300-3-35:2015 |
| B: Cladding        | 25 to 115  | None      | None    |                     |
| C: Adhesive        | 115 to 135 | None      | None    |                     |
| D: Contact         | 135 to 250 | None      | None    |                     |
| E: Rest of ferrule |            | None      | None    |                     |

## Cable Technical Data



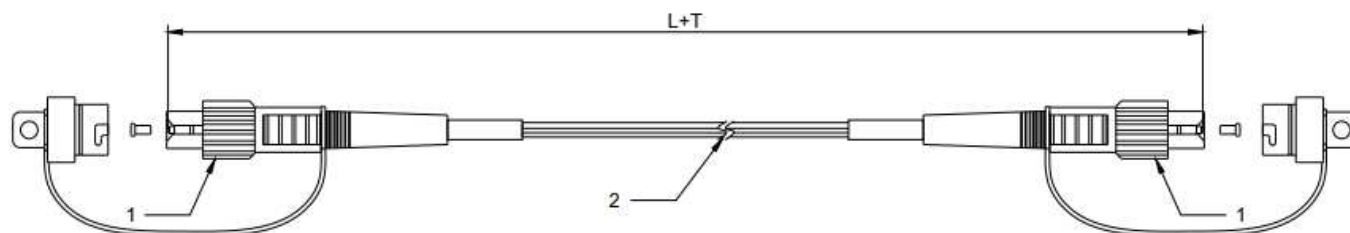
| Fiber Count                                | 1F                                                                                                                     |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Message Wire                               | Solid Steel wire/ Stranded Steel wire/FRP/KFRP<br>1.0mm or (7*0.4mm)-1.2mm                                             |
| Strength member                            | FRP/KFRP/Solid Steel wire<br>0.45-0.52mm                                                                               |
| Cable diameter(mm) Approx.                 | 2.0*5.0(±0.1)                                                                                                          |
| Cable weight(kg/km) Approx                 | 18.5/20                                                                                                                |
| Tensile Strength Short/ Long Term(N)       | 600/300 for Steel wire strength member+FRP Strength member<br>400/200 for FRP wire strength member+FRP Strength member |
| Crush resistance short/long term (N/100mm) | 1000/500                                                                                                               |
| Operating temperature range(°C)            | -40°C ~+70°C                                                                                                           |



## Connector Optical Specifications

|                                                      |                                                                                                   |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Type                                                 | Mini IP SC/APC                                                                                    |
| Insertion loss                                       | Max. ≤ 0.3 dB                                                                                     |
| Return loss                                          | ≥ 60 dB                                                                                           |
| Tensile strength between optical cable and connector | Load: 300N Duration: 5s                                                                           |
| Water proof                                          | IP67                                                                                              |
| Fall                                                 | Drop height: 1.5 m<br>Number of drops: 5 for each plug<br>Test temperature: -15°C and 45°C        |
| Bending                                              | Load: 45 N<br>Duration: 8 cycles, 10s/cycle                                                       |
| Torsion                                              | Load: 15 N<br>Duration: 10 cycles ± 180°                                                          |
| Static side load                                     | Load: 50 N for 1h                                                                                 |
| Water proof                                          | Depth: under 3m of water. Duration: 7 days                                                        |
| Change of temperature                                | Temperature: -25°C to 70 °C<br>Duration at extreme temps: 1h<br>Temperature change speed: 1°C/min |

## Length Tolerance



| Overall Length(L) (m) | length of tolerance (cm) |
|-----------------------|--------------------------|
| 10<L<40               | +15/-0                   |
| 40<L                  | +0.5% x L/-0             |

## Packaging

This easily taken and well-protected fiber patch cable package has been labelled and marked by OMC as default . Which carton to be used depends on goods Qty . Packing can be customized.



1,PE Wrap



2, Paper Carton



3,Fuming-free Pallet

## Application

Multi-purpose Outdoor&Indoor.  
 For connection between distribution box and RRH.  
 Deployment in Remote Radio Head cell tower applications.  
 Fiber optic communications in harsh outdoor environments  
 Outdoor communication equipment connection  
 Waterproof fiber equipment SC port Remote wireless base station  
 FTTH wiring project

## Features

Fast deployment, plug and play.  
 Double locked anti-vibration design.  
 Easy to install and uninstall.

### Installation conditions

| Weather condition                           | Max. span(m) | Installation sag | Installation sag ratio (m) | Installation tensile (N) | Weather load tensile (N) | weather load sag(m) | weather load sag ratio |
|---------------------------------------------|--------------|------------------|----------------------------|--------------------------|--------------------------|---------------------|------------------------|
| Max. wind speed:<br>37 m/s<br>ice: 0        | 50           | 1.5%             | 0.5                        | 157                      | 773                      | 1.44                | 2.9%                   |
| Max. wind speed:<br>26.67 m/s<br>ice: 0     | 80           | 1.0%             | 1.125                      | 157                      | 713                      | 2.23                | 3.0%                   |
| Max. wind speed:<br>10.7 m/s<br>ice: 6.35mm | 70           | 1.4%             | 0.98                       | 157                      | 744                      | 2.09                | 3.0%                   |