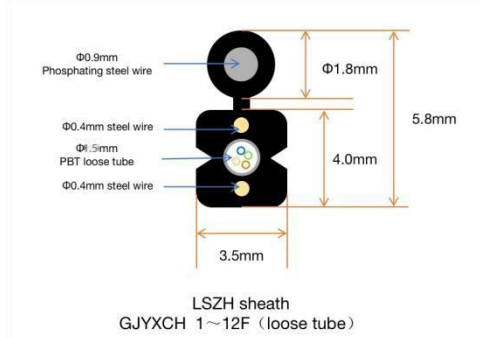


# Specifications of GJYXCH cable

## 1、Cross Section

| Sketch map   | No.                  | Parts               | Spec                  | Remark                                  |
|--|----------------------|---------------------|-----------------------|---|
|  <p>LSZH sheath<br/>GJYXCH 1~12F (loose tube)</p> | 1                    | fibers              | number                | 1~12cores                               |
|  |                      | Loose tube          | material/Dia          | PBT/ $\Phi$ <b>1.5</b>                  |
|  | 2                    | Strength member     | material              | Steel wire                              |
|  |                      |                     | Diameter(mm)          | $\Phi$ 0.4mm*2                          |
|  | 3                    | Message wire        | Material/<br>Diameter | Phosphating steel wire/<br>$\Phi$ 0.9mm |
|  | 4                    | Jacket material     | material              | LSZH                                    |
|  |                      |                     | color                 | black                                   |
|  | 5                    | Cable diameter(mm)  | --                    | $(3.5 \pm 0.2) * (5.8 \pm 0.2)$         |
|  | 6                    | Min. bending radius | Static                | 15D                                     |
| Dynamic  |                      |                     | 30D                   |   |
| 7  | Tensile performance  | Short term          | 600N                  |   |
| 8  | Crush                | Short term          | 1500N/100mm           |   |
| 9  | Cable weight (kg/km) | approx.             | 29.0                  |   |

## 2、Mechanical and Environmental Characteristics

| Item                                       | Test standard      | Spec             | Acceptance Criteria                                       |
|--|--------------------|------------------|---|
| Temperature Range Transportation & Storage | -----              | - 10 to +70°C    | -----   |
| Temperature Range Installation             | -----              | - 10 to +70°C    | -----   |
| Temperature Cycling                        | IEC 60794-1-2-F1   | - 25 to +70°C    | Additional Loss $\leq$ 0.4dB/km                           |
| Cable Bend                                 | IEC 60794-1-2-E11A | 5×cable Diameter | No fiber breakage   |
| Dynamic Load (short term)                  | IEC 60794-1-2-E1A  | 600N             | Fiber strain $<$ 0.4%<br>Without residual additional Loss |
| Crush                                      | IEC 60794-1-2-E3   | 1500N/100mm      | No fiber breakage   |
| Impact                                     | IEC 60794-1-2-E4   | 1 N*m            | No fiber breakage   |
| Flame retardant property of optical cable  | IEC-60332-1        | --               | Single vertical combustion test qualified                 |

### 3、Optical Characteristics

|                      |                                     |
|----------------------|-------------------------------------|
| Type of Fible        | G657A1                              |
| Attenuation in cable | 0.35dB/km @1310nm 0.25dB/km @1550nm |

### 4、Else

|                        |   |
|------------------------|---|
| Sheath Color           | black   |
| Sheath Marking         | Printing per meter: Print as required, Ink printing |
| The length of delivery | According to the customer                           |

### Optical fiber characteristics

#### Optical fiber characteristics (G.657A1 FIBER)

| Category   | Description                               |                      | Specifications                                      |
|--|---|----------------------|---|
|  |   |                      | G. 657A1  |
| Optical Specifications   | Attenuation                               | @1310nm              | $\leq 0.35\text{dB/km}$                             |
|  |   | @1550nm              | $\leq 0.25\text{dB/km}$                             |
|  | Zero Dispersion Wavelength                |                      | 1300~1324nm   |
|  | Zero Dispersion Slope                     |                      | $\leq 0.092\text{ps}/(\text{nm}^2 \cdot \text{km})$ |
|  | Dispersion                                | @1310nm              | $\leq 3.5 \text{ ps}/\text{nm} \cdot \text{km}$     |
|  |   | @1550nm              | $\leq 18.0 \text{ ps}/\text{nm} \cdot \text{km}$    |
|  | Cable Cutoff Wavelength( $\lambda_{cc}$ ) |                      | $\leq 1260\text{nm}$                                |
|  | Polarization Mode Dispersion (PMD)        |                      | $\leq 0.2\text{ps}/\sqrt{\text{km}}$                |
| Macro-bend induced attention<br>10 turns around a mandrel of 15mm radius at 1550nm |   | $\leq 0.25\text{dB}$ |   |
| Geometric Specifications   | Mode Field Diameter                       | @1310nm              | $8.6 \pm 0.4 \mu\text{m}$                           |
|  | Cladding Diameter                         |                      | $125 \pm 1 \mu\text{m}$                             |
|  | Cladding Non-Circularity                  |                      | $\leq 1.0\%$  |
|  | Coating Diameter                          |                      | $243 \pm 7 \mu\text{m}$                             |
|  | Coating/Cladding Concentricity Error      |                      | $\leq 8 \mu\text{m}$                                |
|  | Core/Cladding Concentricity Error         |                      | $\leq 0.5 \mu\text{m}$                              |
| Mechanical Specifications  | Proof Test level                          |                      | $\geq 1.0\%$  |
|  | Fiber Curl Radius                         |                      | $\geq 4.0\text{m}$                                  |
|  | Peak Coating Strip Force                  |                      | 1.3~8.9N  |

-End of Specification-