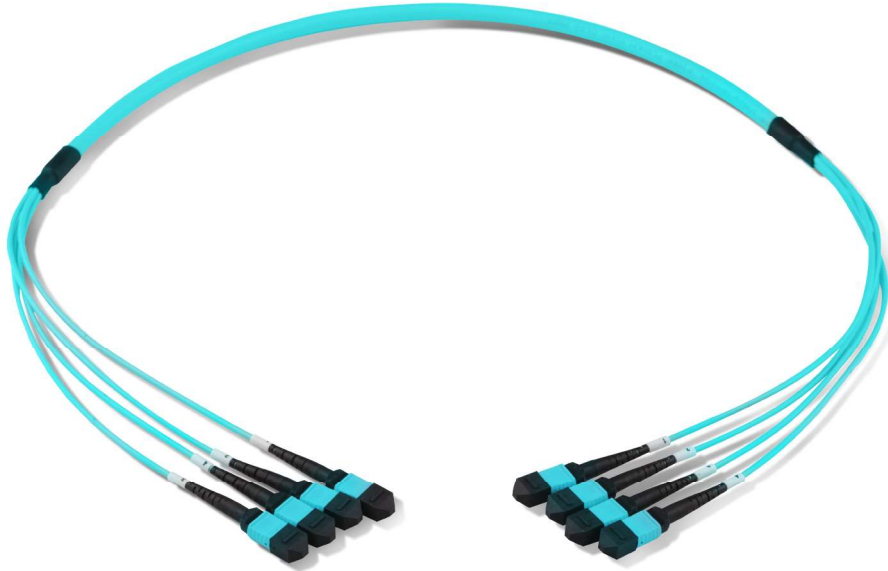


## MPO/MTP Trunk Cable Specification



### Application

- 1.Data communication network.
- 2.Optical System Access network.
- 3.Storage area networking fiber channel.
- 4.High density architectures.

### Features

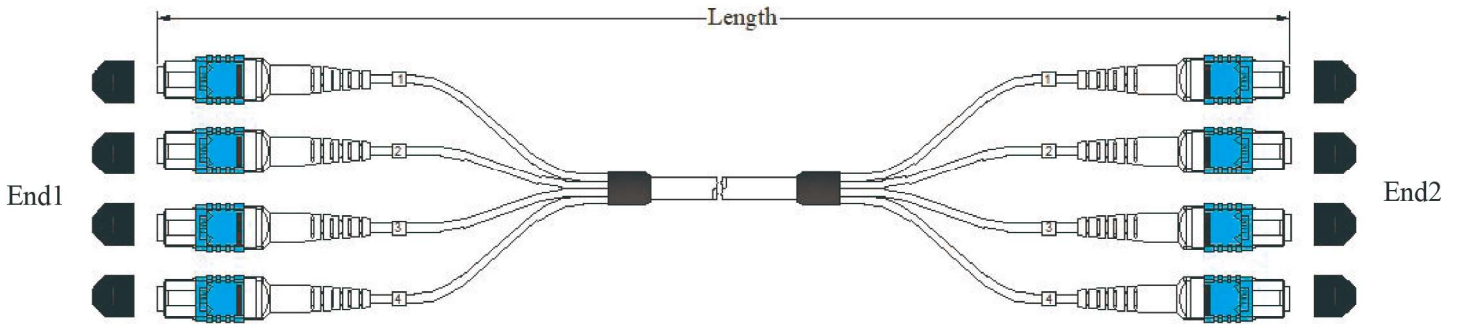
- 1.100% pre-terminated and tested in factory to ensure transfer performance.
- 2.Rapid configuration and networking, reduce installation time.
- 3.Supports 40G and 100G network applications.
- 4.Cable Jacket material: LSZH, OFNR, OFNP available.
- 5.Supports up to 12F, 24F, 48F, 72F, 96F, 144F, customized products are available.

### Connector Types

| Type | Reference   | Note        |   |
|------|-------------|-------------|---|
| MPO  | IEC 61754-7 | Single mode | APC: Green connectors (Standard )<br>APC: Yellow connectors (Elite) |
|      |             | Multimode   | PC: Aqua Connectors   |
| MTP  | IEC 61754-7 | Single mode | APC: Green connectors (Standard )<br>APC: Yellow connectors (Elite) |
|      |             | Multimode   | PC: Aqua Connectors   |

## Dimensional Diagrams

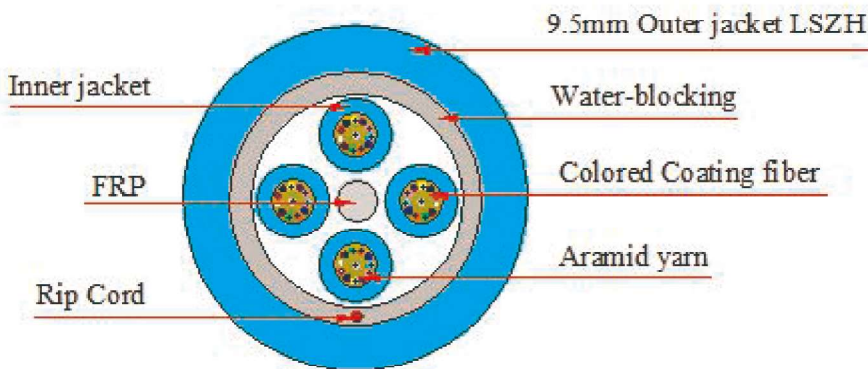
### 1. MPO/MTP Trunk Cable (Method A, Method B, Method C).



## Patch cord versions

| Jumper tolerance requirement |                          |
|------------------------------|--------------------------|
| Overall length (L) (M)       | length of tolerance (CM) |
| $0 < L \leq 20$              | +10/-0                   |
| $20 < L \leq 40$             | +15/-0                   |
| $L > 40$                     | +0.5%L/-0                |

## Cable Structure



## Cable Parameters

| Fiber account | OD(mm)  | Nominal Weight (kg/km) | Max.tensile Strength(N) |           | Max.Crush Resistance (N/100mm) |           | Min.Bending Radius(mm) |        |
|---------------|---------|------------------------|-------------------------|-----------|--------------------------------|-----------|------------------------|--------|
|               |         |                        | Short-term              | Long-term | Short-term                     | Long-term | Dynamic                | Static |
| 48            | 9.5±0.3 | 79                     | 500                     | 180       | 1000                           | 300       | 20D                    | 10D    |

## Optical Characteristics

| Item           | Parameter                                  |  |  |  | Reference      |
|----------------|--|--|--|--|----------------|
|                | Single mode                                |  | Multimode                                  |  |                |
|                | Standard                                   | Elite                                      | Standard                                   | Elite                                      |                |
| Insertion loss | Typical $\leq$ 0.30dB<br>Max $\leq$ 0.75dB | Typical $\leq$ 0.15dB<br>Max $\leq$ 0.35dB | Typical $\leq$ 0.50dB<br>Max $\leq$ 0.25dB | Typical $\leq$ 0.10dB<br>Max $\leq$ 0.35dB | IEC 61300-3-34 |
| Return loss    | $\geq$ 50dB (PC)<br>$\geq$ 60dB (APC)      | $\geq$ 55dB (PC)<br>$\geq$ 65dB (APC)      | $\geq$ 30dB(PC)                            | $\geq$ 30dB(PC)                            | IEC 61300-3-6  |

## End-Face Geometry

| Ferrule parameter |          | IEC-61300--3-30 |          |
|-------------------|----------|-----------------|----------|
|                   |          | Minimum         | Maximum  |
| ROC               | ROC-X:   | 2000mm          | $\infty$ |
|                   | ROC-Y:   | 50mm            | $\infty$ |
| Angle             | Angle-X: | -0.2°           | 0.2°     |
|                   | Angle-Y: | PC              | 0.2°     |
|                   |          | APC             | 7.85°    |
| Fiber Hight:      |          | 1000nm          | 3500nm   |
| Max.DH.All:       |          | -300nm          | 300nm    |
| DH.Adj:           |          | -300nm          | 300nm    |
| DH.Ave Fiber:     |          | -300nm          | 300nm    |
| Core Dip:         | MM       | -200nm          | 300nm    |
|                   | SM       | N/A             | N/A      |
| Ferrule height    |          | 7.9mm           | 8.05mm   |

## End-Face Quality (SM)

| Zone               | Range ( $\mu$ m) | 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    |                     |

## End-Face Quality (MM)

| Zone               | Range (μm) | Scratches | Defects | Reference           |
|--------------------|------------|-----------|---------|---------------------|
| A: Core            | 0 to 65    | None      | None    | IEC 61300-3-35:2015 |
| B: Cladding        | 65 to 115  | None      | None    |                     |
| C: Adhesive        | 115 to 135 | None      | None    |                     |
| D: Contact         | 135 to 250 | None      | None    |                     |
| E: Rest of ferrule |            | None      | None    |                     |

## Mechanical Characteristics

| Test                           | Conditions   | Reference      |
|--------------------------------|--|----------------|
| Endurance                      | 500 matings  | IEC 61300-2-2  |
| Vibration                      | Frequency: 10 to 55Hz, Amplitude: 0.75mm           | IEC 61300-2-1  |
| Cable retention                | 400N (main cable); 50N (connector part)            | IEC 61300-2-4  |
| Strength of coupling mechanism | 80N for 2 to 3mm cable                             | IEC 61300-2-6  |
| Cable torsion                  | 15N for 2 to 3mm cable                             | IEC 61300-2-5  |
| Fall                           | 10 drops, 1m drop height                           | IEC 61300-2-12 |
| Static lateral load            | 1N for 1h (main cable); 0.2N for 5min (ranch part) | IEC 61300-2-42 |
| Cold                           | -25°C, 96h duration                                | IEC 61300-2-17 |
| Dry heat                       | +70°C, 96h duration                                | IEC 61300-2-18 |
| Change of temperature          | -25°C to +70°C, 12 cycles                          | IEC 61300-2-22 |
| Humidity                       | +40°C at 93%, 96h duration                         | IEC 61300-2-19 |