

Fiber-optic cable with connector 2 core

1 Model Number

1.1 Model Number Description (Table 1)

Example.) TFC-2C-SM-SC-SC-2m

① ② ③ ④

Table 1

| Table | Data Item | Input Number | Contents |
|-------|----------------|--------------|--------------------------|
| ① | Cores | 2C | 2-core code |
| ② | Fiber Type | SM | Single mode (OS2) |
| | | OM2 | 1G Multi mode |
| | | OM3 | 10G Multi mode |
| | | OM4 | 10G+ Multi mode |
| ③ | Connector Type | SC-OPEN | One sided SC |
| | | SC-SC | Both sides SC |
| | | SC-LC | SC-LC |
| | | LC-OPEN | One sided LC |
| | | LC-LC | Both sides LC |
| ④ | Length | Lm | L=Length Unit : Meter |

2 Structure

2.1 Structure of Optical Fiber Core Wire (Table 2)

Table 2.

| Data Item | Specification | | |
|---------------------------|----------------------|-----------|----------------------|
| Types of Optical Fiber | Single mode | | Multi mode |
| | SM type quartz glass | | GI type quartz glass |
| | ITU-T G.657 A2 | | ITU-T G.651 |
| Core diameter | - | | 50±3μm |
| Mode field diameter | 1310nm | 8.6±0.4μm | - |
| | 1550nm | 9.7±0.5μm | - |
| Clad(ding) diameter | 124.5±0.7μm | | 125±1μm |
| Coating | PVC | | |
| Coated Outer Diameter | 0.9±0.1mm | | |

2.2 Structure of an optical fiber cord (Figure 1, Table 3)

Figure 1.

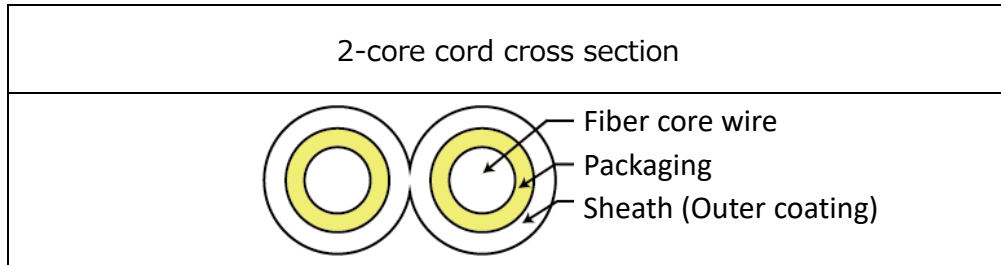
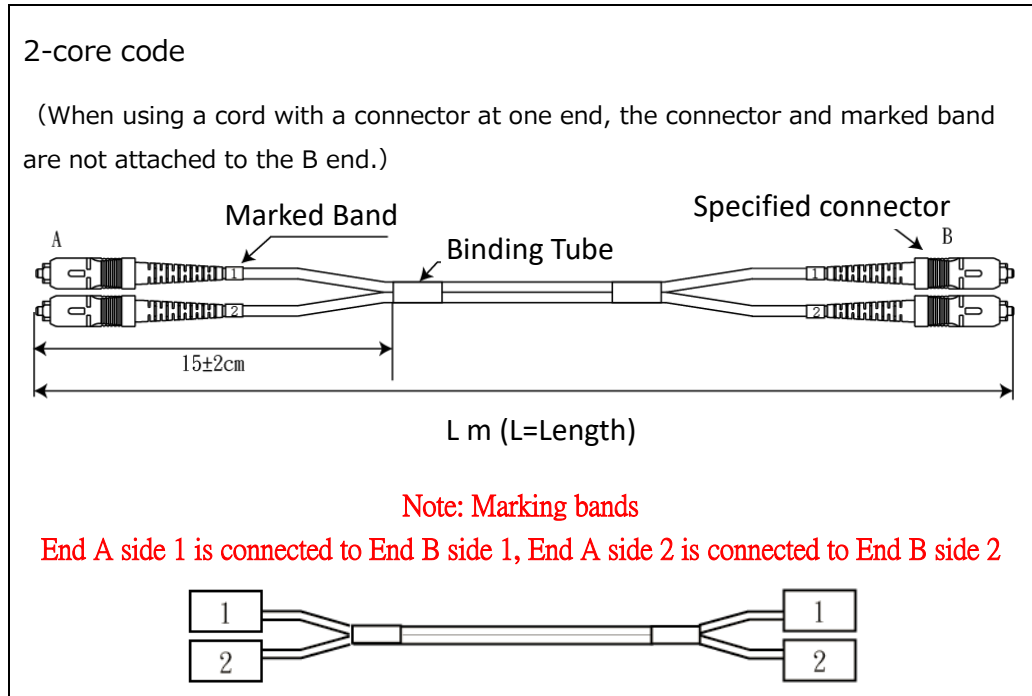


Table 3.

| Data Item | Specification | |
|------------------------------------|-------------------------------|--------------------|
| Packaging | Aramid Fiber | |
| Sheath Material (Outer coating) | LSZH (Low Smoke Zero Halogen) | |
| Outer Diameter Dimensions | 2-core code | 2.0 x4.0mm(±0.2mm) |
| Code Color | Single mode (OS2) | Yellow |
| | 1G Multi mode (OM2) | Chartreuse green |
| | 10G Multi mode (OM3) | Aqua color |
| | 10G+ Multi mode (OM4) | Aqua color |

2.3 Structure of Fiber Optic Cord with Connector (Figure 2)

Figure 2.



2.4 Cord lengths and tolerances (Table 4)

Table 4.

| Specified length (total length) | Tolerance range |
|---------------------------------|-----------------|
| $L \leq 10\text{m}$ | -0, +6cm |
| $10\text{m} < L$ | -0, +10cm |
| $20\text{m} \leq L$ | -0, +13cm |

3 Characteristics

3.1 Optical properties of optical fiber (Table 5, Table 6)

Table 5.

| Single mode Specification | |
|---------------------------|-------------------|
| Wavelength | Transmission loss |
| 1260nm | 0.45dB/km (Max.) |
| 1310nm | 0.40dB/km (Max.) |
| 1383nm | 0.35dB/km (Max.) |
| 1550nm | 0.30dB/km (Max.) |
| 1625nm | 0.35dB/km (Max.) |

Table 6.

| Multi mode Specification | | | | |
|--------------------------|------------|---------------------|----------------------|----------------------|
| Data Item | Wavelength | OM2 | OM3 | OM4 |
| Transmission loss | 850nm | 3.0dB/km (Max.) | 3.0dB/km (Max.) | 3.0dB/km (Max.) |
| | 1300nm | 1.0dB/km (Max.) | 1.0dB/km (Max.) | 1.0dB/km (Max.) |
| Transmission bandwidth | 850nm | 500MHz·km (Min.) | 1500MHz·km (Min.) | 3500MHz·km (Min.) |
| | 1300nm | 500MHz·km (Min.) | 500MHz·km (Min.) | 500MHz·km (Min.) |
| Effective bandwidth | 850nm | - | 2000MHz·km (Min.) | 4700MHz·km (Min.) |

3.2 Mechanical Properties of Optical Fiber Cord (Table 7)

Table 7.

| Data Item | | Specification | |
|---------------------------|-------|---------------|---------------------------------------|
| Allowable bending radius | Fiber | Single mode | 7.5mm |
| | | Multi mode | 15mm |
| | Code | Fixed time | Cable outer diameter 10 times or more |
| Max. allowable tension | | When wired | 100N |
| | | Fixed time | 60N |
| Lateral pressure strength | | When wired | 500N/10cm |
| | | Fixed time | 100N/10cm |

3.3 Temperature Characteristics of Fiber Optic Cord with Connector (Table 8)

Table 8.

| Data Item | Specification |
|-----------------------|---------------|
| Storage temperature | -20°C ~ +70°C |
| Operating temperature | -0°C ~ +70°C |

4 Connector Specifications

4.1 Ferrule polishing (Table 9)

Table 9.

| Connector type | Specification |
|----------------|---------------|
| SC Connector | UPC |
| LC Connector | UPC |

4.2 Connector Specifications (Table 10)

Table 10.

| Data Item | Single mode | | Multi mode | |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| | SC | LC | SC | LC |
| Connection loss | 0.3dB (Max.) | 0.3dB (Max.) | 0.3dB (Max.) | 0.3dB (Max.) |
| Return loss | 50dB (Min.) | 50dB (Min.) | — | — |

4.3 Connector, Boot color (Table 11)

Table 11.

| Connector type | Single mode | | Multi mode | |
|----------------|-------------|-------|------------|------|
| | Cover | Boot | Cover | Boot |
| SC | blue | blue | SC | blue |
| LC | blue | white | LC | blue |

4.4 Connector Compliant Standards (Table 12)

Table 12.

| Connector type | Standard |
|----------------|------------------|
| SC | JIS C 5973 (F04) |
| | IEC 61754-4 |
| | Telcordia GR-326 |
| LC | JIS C 5964-20 |
| | JIS X 5150 |
| | IEC 61754-20 |
| | Telcordia GR-326 |

5 Environmental Standards

RoHS Compliant

6 Compliant Standards

ITU-T G.657 A2 (Single mode), ITU-T G.651(Multi mode)

Telcordia GR-326-CORE Standard