

DIN Fiber Optic Patch Cord Specification



Application

- 1.Optical fiber communication systems engineering
- 2.Fiber optic data communication network
- 3.Fiber CATV engineering
- 4.Other optical technology tests

Features

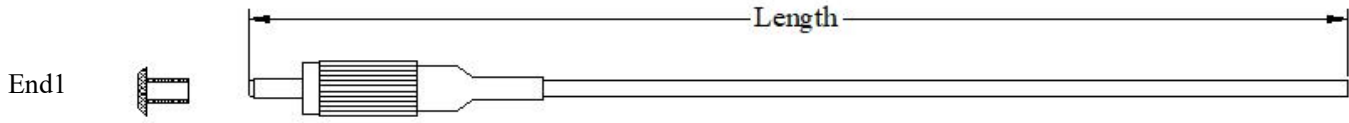
- 1.The style is diverse, the interface is complete
- 2.Low insertion loss and added loss
- 3.Height of attenuation
- 4.High back loss, small volume, light weight
- 5.End-face geometry and quality superior than IEC and Telcordia standards.
- 6.LSZH, OFNP, OFNR cable jacket.
- 7.Mechanical performance: IEC 61754-3 standard.
- 8.RoHS and REACH materials compliant.

Connector Types

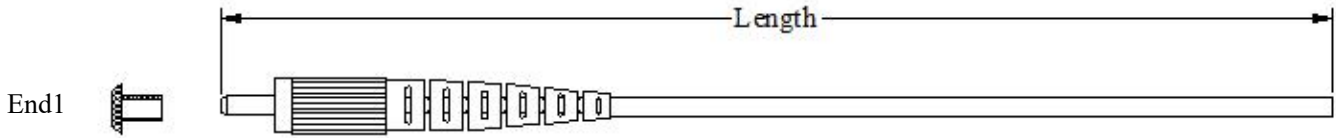
| Type | Reference | Note | |
|------|-------------|---------------------|--|
| DIN | IEC 61754-3 | Single mode simplex | APC: Green connectors, Green boots UPC: Blue connectors, Blue boots |
| | | Single mode duplex | APC: Green connectors, Green boots UPC: Blue connectors, Blue boots |

Dimensional Diagrams

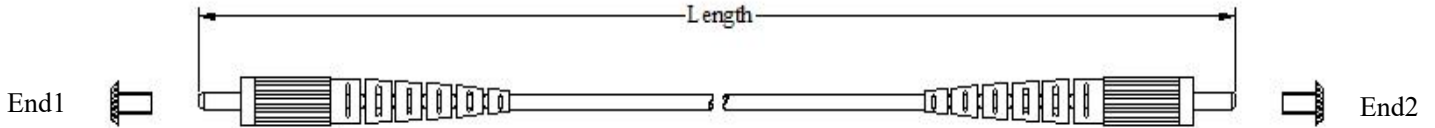
1. DIN 0.9mm simplex pigtail



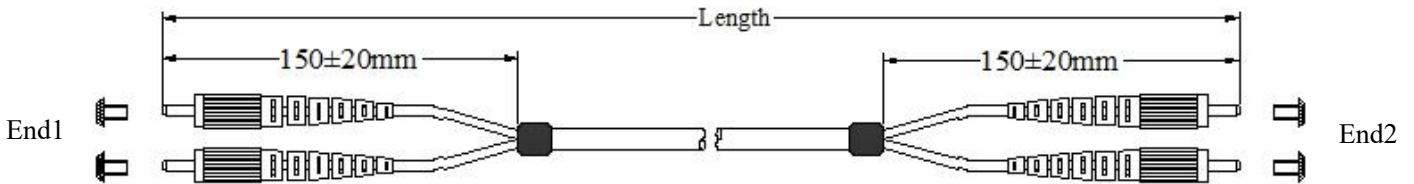
2. DIN 2.0mm&3.0mm simplex pigtail



3. DIN 2.0mm&3.0mm simplex patchcord



4. DIN 2.0mm&3.0mm duplex patchcord



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 |

Optical Characteristics

| Item | Parameter | | Reference |
|----------------|---|---|----------------|
| | Single mode | Multimode | |
| Insertion loss | Typical value ≤ 0.15 dB; Maximum ≤ 0.30 | Typical value ≤ 0.15 dB; Maximum ≤ 0.30 | IEC 61300-3-34 |
| Return loss | ≥ 60 dB (APC); ≥ 50 dB (UPC) | ≥ 30 dB (UPC) | IEC 61300-3-6 |

End-Face Geometry

| Item | UPC (Ref: IEC 61755-3-1) | APC (Ref: IEC 61755-3-2) |
|--------------------------|--------------------------|--------------------------|
| Radius of curvature (mm) | 10 to 25 | 5 to 12 |
| Fiber height (nm) | -100 to 100 | -100 to 100 |
| Apex offset (μm) | 0 to 50 | 0 to 50 |
| APC angle (°) | / | 8° ±0.2° |
| Key error (°) | / | 0.2° max |

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 | |

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 | 100N (patch cable); 5N (pigtail) | 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 (patch cable); 0.2N for 5min (pigtail) | 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 |