



ST to LC FIBER OPTIC PATCH CORD

1. APPLICATION

This specification covers the general requirements for fiber optic patch cord, The cables are high grade duplex cable available FR-LSZH. The patch cords are low insertion loss and high return loss. Good in repeatability and exchangeability. The patch cord shall be factory assembled with high quality control and 100% test Provide label for easily to identify. The patch cord shall be available length in 3, 5, and 10 meters or other.

LINK fiber optic patch cord support application such as 40/100Gbps Ethernet, IEEE802.3ae,10G Ethernet, IEEE802.3z,Gigabit Ethernet, Fast Ethernet, Ethernet,100BASE-F, 52/155/622Mbps and 1.2Gbps ATM, FDDI, Fiber channel and others.

- | | |
|------------------------------|--------------------------------|
| ANSI/TIA-568-C.3 | ISO/IEC 11801:2002 |
| ANSI/TIA/EIA-568-B.3 | ISO/IEC 11801:2011 (Ed.2.2) |
| ANSI/ICEA 696, ANSI/ICEA 596 | IEC 60793, IEC 60794 |
| FOTP EIA/TIA-455 | IEC 61300-2, IEC 61300-3 |
| ITU-T G.652D (Singlemode) | TIA/EIA-604, FOCIS 2, FOCIS 10 |
| ITU-T G.651 (Multimode) | RoHS Compliant, EN 50173-1 |
| GR 326 CORE (Singlemode) | UL, FR-LSZH, OFNR |

2. ORDER INFORMATION

ST to LC FIBER OPTIC PATCH CORD, DUPLEX, SIMPLEX, FR-LSZH AND OFNR

| Descriptions | Part Number | | | | |
|--------------------------------------|----------------|-------------------|-----------------|-----------------|-----------------|
| | 9/125 μm (OS2) | 62.5/125 μm (OM1) | 50/125 μm (OM2) | 50/125 μm (OM3) | 50/125 μm (OM4) |
| ST to LC Patch Cord, Duplex, 3.0mm. | UFP942D31-XX | UFP642D31-XX | UFP542D31-XX | UFP442D31-XX | UFP342D31-XX |
| ST to LC Patch Cord, Simplex, 3.0mm. | UFP942S31-XX | UFP642S31-XX | UFP542S31-XX | UFP442S31-XX | UFP342S31-XX |
| ST to LC Patch Cord, Duplex, 2.0mm. | UFP942D21-XX | UFP642D21-XX | UFP542D21-XX | UFP442D21-XX | UFP342D21-XX |
| ST to LC Patch Cord, Simplex, 2.0mm. | UFP942S21-XX | UFP642S31-XX | UFP542S31-XX | UFP442S31-XX | UFP342S31-XX |

Y = Polish Contact, 0 : PC-PC, 1 : UPC-UPC, 2 : APC-APC, 6 : UPC-APC, 8 : APC-UPC
 XX = Length, 03 : 3 meters, 05 : 5 meters, or available on request.



3. OPTICAL FIBER

| Items | | Specifications |
|--------------------------------------|------------------------|---|
| Fiber Type | | 9/125 μm (OS2) |
| Max. / Typ. Attenuation | 1310 nm | ≤ 0.35 / ≤ 0.33 dB/km |
| | 1383 nm | ≤ 0.35 / ≤ 0.31 dB/km |
| | 1550 nm | ≤ 0.21 / ≤ 0.19 dB/km |
| | 1625 nm | ≤ 0.23 / ≤ 0.20 dB/km |
| Core | Mode Field Diameter | 9.2 ± 0.4 μm @ 1310 nm 10.4 ± 0.5 μm @ 1550 nm |
| Cladding Diameter | | 125 ± 0.7 μm |
| Coating Diameter, Primary | | 242 ± 5 μm |
| Coating Diameter, Secondary | | 250 ± 5 μm |
| Cladding Non-circularity | | ≤ 0.7 % |
| Core/Cladding Concentricity error | | ≤ 0.5 μm |
| Coating/Cladding Concentricity error | | ≤ 12 μm |
| Zero Dispersion Wavelength | | 1300 ~ 1324 nm |
| Zero Dispersion Slope | | ≤ 0.092 ps/(nm ² .km) |
| Cut-off Wavelength | λ _o (Fiber) | 1150 ~ 1330 nm |
| | λ _∞ (Cable) | ≤ 1260nm |
| Proof Test Stress | | 100 Kpsi |
| Chromatic Dispersion | λ ; 1285~1340nm | ≤ 3.5 ps/nm.km |
| | λ = 1550nm | ≤ 18 ps/nm.km |
| | λ = 1625nm | ≤ 22 ps/nm.km |
| Polarization mode dispersion (PMD) | | ≤ 0.20 ps/√km |
| Fiber Curl | | ≥ 4M |
| Numerical Aperture | | 0.130 ± 0.010 |
| Group refractive index | 1310nm | 1.4676 |
| | 1550nm | 1.4682 |

Table 1 The Optical, Geometrical Performance of the Singlemode Fiber (The specification conforms to the requirement of ISO/IEC11801, ANSI/TIA-568-C.3, IEC 60793-2B1.3, ITU-T G.652D)

| Items | | Specifications | | | |
|---|---------|----------------------|--------------------|--------------------|--------------------|
| | | 62.5/125 μm (OM1) | 50/125 μm (OM2) | 50/125 μm (OM3) | 50/125 μm (OM4) |
| Max./ Typ. Attenuation (dB/km) | 850 nm | ≤ 3.0 / ≤ 2.7 | ≤ 2.7 / ≤ 2.5 | ≤ 2.7 / ≤ 2.3 | ≤ 2.7 / ≤ 2.3 |
| | 1300 nm | ≤ 0.8 / ≤ 0.6 | ≤ 0.8 / ≤ 0.7 | ≤ 0.8 / ≤ 0.6 | ≤ 0.8 / ≤ 0.6 |
| Bandwidth (MHz/km) | 850 nm | ≥ 200 | ≥ 500 | ≥ 1500 | ≥ 3500 |
| | 1300 nm | ≥ 600 | ≥ 500 | ≥ 500 | ≥ 500 |
| 850nm Laser Bandwidth (MHz/km) | | N.A | N.A | ≥ 2000 | ≥ 4700 |
| Core Diameter (μm) | | 62.5 ± 2.5 | 50.0 ± 2.5 | 50.0 ± 2.5 | 50.0 ± 2.5 |
| Cladding Diameter (μm) | | 125 ± 1 | 125 ± 1 | 125 ± 1 | 125 ± 1 |
| Core Non-circularity (%) | | ≤ 5 | ≤ 5 | ≤ 5 | ≤ 5 |
| Cladding Non-circularity (%) | | ≤ 1.0 | ≤ 1.0 | ≤ 1.0 | ≤ 1.0 |
| Core/Cladding Concentricity error (μm) | | ≤ 1.5 | ≤ 1.5 | ≤ 1.5 | ≤ 1.5 |
| Coating Diameter, Primary (μm) | | 242 ± 5 | 242 ± 5 | 242 ± 5 | 242 ± 5 |
| Coating Diameter, Secondary (μm) | | 250 ± 5 | 250 ± 5 | 250 ± 5 | 250 ± 5 |
| Coating Non-Circularity (%) | | ≤ 5 | ≤ 5 | ≤ 5 | ≤ 5 |
| Coating/Cladding Concentricity error (μm) | | ≤ 12 | ≤ 12 | ≤ 12 | ≤ 12 |
| Proof Test Stress (kpsi) | | 100 | 100 | 100 | 100 |
| Bending Loss @ 850 & 1300 nm (100 turns, D=75 mm) | | ≤ 0.5 dB | ≤ 0.5 dB | ≤ 0.5 dB | ≤ 0.5 dB |
| Zero-Dispersion Wavelength | | 1332-1354nm | 1295~1315nm | 1295-1315nm | 1295-1315nm |
| Zero-Dispersion Slope (ps/(nm ² .km)) | | ≤ 0.097 | ≤ 0.101 | ≤ 0.101 | ≤ 0.101 |
| Numerical Aperture | | 0.275 ± 0.015 | 0.200 ± 0.015 | 0.200 ± 0.015 | 0.200 ± 0.015 |
| Group refractive index | 850nm | 1.496 | 1.482 | 1.482 | 1.482 |
| | 1300nm | 1.491 | 1.477 | 1.477 | 1.477 |

Table 2 The optical, Geometrical Performance of the Multimode Fiber (The specification conforms to the requirement of ISO/IEC11801, ANSI/TIA-568-C.3, IEC 60793-2A1a, IEC 60793-2A1b, ITU -T G.651)

4. PATCH CORD CONSTRUCTIONS AND MECHANICAL

The construction of the patch cord shall be in accordance with Table 3 below.

| Items | Specifications |
|-------------------------|--------------------------------|
| Ferrule | Zirconia ceramic, Pre-radiused |
| Boot | Thermoplastic, UL 94-0 |
| ST Housing | Brass with nickel plated |
| LC Housing | PBT, Thermoplastic, UL 94V-0 |
| Jacket | FR-LSZH and OFNR (UL-1666) |
| Cable Diameter(Approx.) | 3.0 mm. |
| Cable Diameter(Approx.) | 2.0 mm. |
| Pulling Force | 200 N |
| Minimum Bending Radius | 30 mm. |

Table 3 Construction and Mechanical of fiber optic patch cord.

5. PERFORMANCE

| Items | | SINGLEMODE (OS2) | MULTIMODE (OM1, OM2, OM3, OM4) |
|----------------|------|---------------------|-----------------------------------|
| Insertion Loss | Typ. | ≤ 0.15 dB | ≤ 0.15 dB |
| | Max. | ≤ 0.30 dB | ≤ 0.30 dB |
| Return Loss | UPC | ≥ 50 dB | ≥ 20 dB |
| | APC | ≥ 60 dB | - |

6. TEMPERATURE RANGE

- Operation Temperature : -40°C to 85°C
- Storage/Shipping Temperature : -40°C to 85°C

- END OF SPECIFICATION -



Specifications subject to change without notice. Revised 10/2017
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