# FIBRE PATCH CORD

They comprise two tight buffer fibres housed within a common outer jacket in OM1, OM2, OM3, OM4, OS1, OS2 multi-mode and single mode variants. Both ends are terminated with a high performance hybrid or single type connector comprising of a SC, ST, FC, LC, MTRJ, E2000 connector in simplex and duplex. These are typically not ruggedized, depending on the application and a spring loaded electrical contact housed within LSHF plastic shell possible, making them suitable for internal use.

## COMPLIANCE

Telcordia (formerly Bellcore) GR-326-CORE Generic requirements for Single mode optical connectors and Jumper assemblies.
IEC 874-1 Generic specification for fibre optic connectors and cables
ANSI/TIA-568-C.3, ISO/IEC 11801 2nd Ed., CENELEC EN 50173, UL94V-0

## KEY FEATURES

ST, SC, FC, LC, MT-RJ, E2000 connectors
Duplex and Simplex versions uniform and hybrid cord versions
Position A/Position B markings
100% factory transmission tested per ANSI/TIA-568-C.3
Slim-profile boots with durable flexible cable strain relief
Available in 0.9mm, 1.6mm, 2.0mm , 3.0mm sizes

## MECHANICAL & ENVIRONMENTAL CHARACTERISTICS

| | |
|---|---|
| Range of Mode | Single or Multimode |
| Cable Type | Simplex or Duplex Zipcord |
| Connector Style | SC, FC, ST, LC, MTRJ, E2000 |
| Polish or Ferrule Interface Type | PC, UPC, APC |
| Cable Diameter | 0.9mm, 1.6mm, 2.0mm, 3.0mm |
| Lengths | Standard & Custom Lengths |
| Strength Member | Aramid Yarn |
| Outer Jacket | PVC or LSZH |
| Cable Assembly Length (<15 meter Tolerance) | -0/+100mm |
| Cable Assembly Length (>15 meter Tolerance) | -0/+10% |
| Jacket Colour (Multimode: OM1 & OM2) | Orange |
| Jacket Colour (Multimode: OM3 / OM4) | Aqua/Violet |
| Jacket Colour (Single Mode: OS1 & OS2) | Yellow |
| Durability | 500 cycles(0.2 dB max increase), 1000mate/demate cycles |
| Operating Temp. | -20 °C to +70°C/+85°C (armoured) |
| Storage Temp. | -40 °C to +85°C |
| Ferrule Concentricity | < 1µm, Other Ferrule Concentricity < 1µm |
| Humidity (FOTP-5) | 90-95% at 40°C |
| Strength of Coupling Mechanism (FOTP-185) | 33 N at 0° for 5 sec |
| Cable Retention (FOTP-6) | 50 N at 0° for 5 sec. |
| Twist (FOTP-36) | 15 N at 0° 5 turns, 10 cycles |
| Flex (FOTP-1) | 0.5 Kg at 25 cm, +90° to -90°, 100 cycles |

# FIBRE PATCH CORD

## OPTICAL CHARACTERISTICS

| Fibre Type | Max. Attenuation (dB/km) | | | | Min. Overfill Launch Bandwidth (Mhz•km) | | Min. Gigabit Ethernet Link Distance (m) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Gigabit | | 10Gigabit |
| | 850nm | 1300nm | 1310nm | 1550nm | 850nm | 1300nm | 850nm | 1300nm | 850nm |
| OM1 62.5/125µm | ≤2.7 | ≤0.6 | - | - | ≥200 | ≥600 | 275 | 550 | - |
| OM2 50/125µm | ≤2.5 | ≤0.7 | - | - | ≥500 | ≥500 | 550 | 550 | - |
| OM3 50/125µm | ≤2.3 | ≤0.6 | - | - | ≥1500 | ≥500 | 1000 | 600 | 300 |
| OM4 50/125µm | ≤2.3 | ≤0.6 | - | - | ≥3500 | ≥500 | 1000 | 600 | 550 |
| OS1 9/125µm | - | - | ≤0.34 | ≤0.20 | - | - | - | - | - |
| OS2 9/125µm | - | - | ≤0.34 | ≤0.24 | - | - | - | - | |

## OPTICAL PERFORMANCE DATA

| Item | Single mode | | | Multimode | | |
|---|---|---|---|---|---|---|
| | PC | UPC | APC | 62.5/125 | 50/125 | 50/125 10G |
| Insert. Loss/Connector (Single Fibre) | 0.2dB Max. (0.15dB typ.) | | | 0.3dB Max. (0.25dB typ.) | | |
| Return Loss | >50dB | ≥50 dB | ≥60 dB | >35dB | | |
| Insert. Loss/MTRJ Connector | 0.5dB Max. (0.45dB typ.) | | | 0.5dB Max. (0.45dB typ.) | | |
| Pull strength | ≥98N | ≥98N | ≥98N | ≥98N | | |

## TERMINATION SPECIFICATIONS

| | |
|---|---|
| **Geometric Specifications** | |
| Radius of Curvature | 7-25 mm |
| Apex Offset | 0-50 um |
| Radial Fibre Height | -50 to +50 nm |
| Angular Offset | <0.3 degrees |
| Fibre Roughness | 0-25 nm |
| Ferrule Roughness | 0-50 nm |
| **End Face Defects** | |
| Fibre Core | 0 nm² |
| Mode field diameter | 0 nm² |
| Ferrule contact zone | 0 nm² |
| Testing & Inspection | 100% |
| **Epoxy** | |
| Temperature Coeff .Tg | 120 |
| Curing Method | Out Gassed |
| Residual Epoxy | No Visible Epoxy Ring |
| **Configuration Control** | |
| Serialization | Each Cable is Serialized |

# FIBRE PATCH CORD

## LC – LC FIBRE PATCH CORD

| LC-LC Singlemode Patch Cord | OS1 (9/125) | OS2 (G652.D/G657.A1) |
|---|---|---|
| LC/PC-LC/PC 1m Duplex PVC | 332-14OS1L1L1001 | 332-147A1L1L1001 |
| LC/PC-LC/PC 2m Duplex PVC | 332-14OS1L1L1002 | 332-147A1L1L1002 |
| LC/PC-LC/PC 3m Duplex PVC | 332-14OS1L1L1003 | 332-147A1L1L1003 |
| LC/PC-LC/PC 5m Duplex PVC | 332-14OS1L1L1005 | 332-147A1L1L1005 |
| LC/PC-LC/PC 10m Duplex PVC | 332-14OS1L1L1010 | 332-147A1L1L1010 |
| LC/PC-LC/PC 1m Duplex LSZH | 332-24OS1L1L1001 | 332-247A1L1L1001 |
| LC/PC-LC/PC 2m Duplex LSZH | 332-24OS1L1L1002 | 332-247A1L1L1002 |
| LC/PC-LC/PC 3m Duplex LSZH | 332-24OS1L1L1003 | 332-247A1L1L1003 |
| LC/PC-LC/PC 5m Duplex LSZH | 332-24OS1L1L1005 | 332-247A1L1L1005 |
| LC/PC-LC/PC 10m Duplex LSZH | 332-24OS1L1L1010 | 332-247A1L1L1010 |
| LC/APC-LC/APC 1m Duplex PVC | 332-14OS1L3L3001 | 332-147A1L3L3001 |
| LC/APC-LC/APC 2m Duplex PVC | 332-14OS1L3L3002 | 332-147A1L3L3002 |
| LC/APC-LC/APC 3m Duplex PVC | 332-14OS1L3L3003 | 332-147A1L3L3003 |
| LC/APC-LC/APC 5m Duplex PVC | 332-14OS1L3L3005 | 332-147A1L3L3005 |
| LC/APC-LC/APC 10m Duplex PVC | 332-14OS1L3L3010 | 332-147A1L3L3010 |
| LC/APC-LC/PC 1m Duplex PVC | 332-14OS1L3L1001 | 332-147A1L3L1001 |
| LC/PC-LC/PC 1m Simplex PVC | 331-14OS1L1L1001 | 331-147A1L1L1001 |
| LC/PC-LC/PC 3m Simplex PVC | 331-14OS1L1L1003 | 331-147A1L1L1003 |
| LC/APC-LC/APC 1m Simplex PVC | 331-14OS1L3L3001 | 331-147A1L3L3001 |
| LC/APC-LC/APC 3m Simplex PVC | 331-14OS1L3L3003 | 331-147A1L3L3003 |
| LC/APC-LC/APC 3m Simplex LSZH | 331-24OS1L3L3003 | 331-247A1L3L3003 |

| LC-LC Multimode Patch Cord | OM1 (62.5/125) | OM2 (50/125) | OM3 (50/125) | OM4 (50/125) |
|---|---|---|---|---|
| LC/PC-LC/PC 1m Duplex PVC | 332-14OM1L1L1001 | 332-14OM2L1L1001 | 332-14OM3L1L1001 | 332-14OM4L1L1001 |
| LC/PC-LC/PC 2m Duplex PVC | 332-14OM1L1L1002 | 332-14OM2L1L1002 | 332-14OM3L1L1002 | 332-14OM4L1L1002 |
| LC/PC-LC/PC 3m Duplex PVC | 332-14OM1L1L1003 | 332-14OM2L1L1003 | 332-14OM3L1L1003 | 332-14OM4L1L1003 |
| LC/PC-LC/PC 5m Duplex PVC | 332-14OM1L1L1005 | 332-14OM2L1L1005 | 332-14OM3L1L1005 | 332-14OM4L1L1005 |
| LC/PC-LC/PC 10m Duplex PVC | 332-14OM1L1L1010 | 332-14OM2L1L1010 | 332-14OM3L1L1010 | 332-14OM4L1L1010 |
| LC/PC-LC/PC 1m Duplex LSZH | 332-24OM1L1L1001 | 332-24OM2L1L1001 | 332-24OM3L1L1001 | 332-24OM4L1L1001 |
| LC/PC-LC/PC 2m Duplex LSZH | 332-24OM1L1L1002 | 332-24OM2L1L1002 | 332-24OM3L1L1002 | 332-24OM4L1L1002 |
| LC/PC-LC/PC 3m Duplex LSZH | 332-24OM1L1L1003 | 332-24OM2L1L1003 | 332-24OM3L1L1003 | 332-24OM4L1L1003 |
| LC/PC-LC/PC 5m Duplex LSZH | 332-24OM1L1L1005 | 332-24OM2L1L1005 | 332-24OM3L1L1005 | 332-24OM4L1L1005 |
| LC/PC-LC/PC 10m Duplex LSZH | 332-24OM1L1L1010 | 332-24OM2L1L1010 | 332-24OM3L1L1010 | 332-24OM4L1L1010 |

## ORDERING GUIDE

| Patch Cord | Outer Jacket | Cable Dia. | Fibre Type | Connector | Polish | Connector | Polish | Length |
|---|---|---|---|---|---|---|---|---|
| 331: Simplex<br>332: Duplex | 1: PVC<br>2: LSZH<br>3: PE<br>7: OFNP<br>8: OFNR<br>D: LSZH Dca<br>F: LSZH<br>(IEC 60332-3-24) | 1:0.9mm<br>2:1.6mm<br>3:2.0mm<br>4:3.0mm | OM1<br>OM2<br>OM3<br>OM4<br>OM5<br>OS1<br>OS2 : G652.D/G657.A1<br>7A2 = G657.A2<br>7B2 = G657.B2<br>7B3 = G657.B3<br>500 = G655 | S : SC<br>T : ST<br>F : FC<br>L : LC<br>M: MTRJ<br>E : E2000 | 1: PC<br>2: UPC<br>3: APC<br>4: APC 8° | S : SC<br>T : ST<br>F : FC<br>L : LC<br>M: MTRJ<br>E : E2000 | 1: PC<br>2: UPC<br>3: APC<br>4: APC 8° | 1m : 001<br>2m : 002<br>3m : 003<br>5m : 005<br>10m: 010<br>15m: 015 |