

ARMoured FIBRE PATCH CORD SPECIFICATION

Norden armoured patch cord provides flexible interconnection to active equipment, passive optical devices and cross connects. These patch cords are manufactured so as to withstand side pressure and repeated bending and are used in external applications in customer premises, central offices and in harsh environment.

Armoured patch cords are constructed with a stainless steel tube over a standard patch cord with an outer jacket. The flexible metal tube limits the bending radius, preventing the optical fibre from breaking. This ensures a safe and durable optical fibre network system.



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

Cable flame resistant rate: OFNR or IEC60332-3 standard

FEATURES

- Conform to IEC, EIA-TIA, and Telcordia performance requirements
- Together with custom connectors, the cable can be both water proof and gas proof and can withstand high temperatures.
- Layouts can be wired much the same way as ordinary electric cable installation
- Anti rodent, save space, low cost construction
- Improve stability & security
- Easy installation, Maintenance
- Available in different fibre types
- Available in standard and custom lengths
- RoHS, REACH & SvHC compliant

APPLICATION

- Military, Telecommunication Networks
- Factory LAN systems
- Intelligent optical fibre network in buildings, underground network systems
- Transportation control systems
- High Technology medical applications
- CCTV security systems. Broadcasting and cable TV network systems

| Item | Simplex | Duplex | Description |
|--------------|------------------|------------------|-------------|
| Fibre Count | 1 | 2 | |
| Tight buffer | OD 0.6 ± 0.05 mm | OD 0.6 ± 0.05 mm | Blue/Yellow |
| Kevlar | 2*1110 dtex *2 | 2*1110 dtex *2 | Yellow |

MECHANICAL & ENVIRONMENTAL CHARACTERISTICS

| | |
|---------------------------------------------|----------------------------------------------------------|
| Range of Mode | Single or Multimode |
| Cable Type | Simplex or Duplex |
| Connector Style | SC, FC, ST, LC, MTRJ, E2000 |
| Polish or Ferrule Interface Type | PC, UPC, APC |
| Cable Diameter | Simplex : 3.8mm, Duplex : 7.6mm |
| Lengths | Standard & Custom Lengths |
| 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 +85°C |
| Storage Temp. | -40°C to +85°C |
| Ferrule Concentricity | < 1µm, Other Ferrule Concentricity < 1µm |
| Humidity (FOTP-5) | 90-95% at 40°C |
| Ferrule Type | Ceramic |
| Connector Retention | 100N |

Armoured Flexible Tube

| | |
|---------------------|------------|
| Tube Material | Stainless |
| Inner Diameter | 0.9 mm |
| Tensile Strength | ≤147 N |
| Min. Bend Radius | ≥40 ± 5 |
| Pressure Resistance | ≤2450/50 N |

OPTICAL CHARACTERISTICS

| Fibre Type | Max. Attenuation (dB/km) | | | | Min. Overfill Launch Bandwidth (Mhz · km) | | Min. Gigabit Ethernet Link Distance (m) | | |
|----------------|--------------------------|--------|--------|--------|-------------------------------------------|--------|-----------------------------------------|--------|-----------|
| | 850nm | 1300nm | 1310nm | 1550nm | 850nm | 1300nm | Gigabit | | 10Gigabit |
| | | | | | | | 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 | ≥45 dB | ≥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 | | | |

ORDERING INFORMATION

| Part Number | Description |
|------------------|--------------------------------------------------------------------------------------------|
| 340-19OS2L1L1010 | LC/PC - LC/PC Duplex OS2 Single Mode Ruggedized Armoured Fiber Optic Patchcord PVC 10m |
| 340-19OS2L2L2002 | LC/UPC - LC/UPC Duplex OS2 Single Mode Ruggedized Armoured Fibre Optic Patch Cord PVC, 2m |
| 340-19OS2L2L2012 | LC/UPC - LC/UPC Duplex OS2 Single Mode Ruggedized Armoured Fibre Optic Patch Cord PVC, 12m |
| 340-19OS2L2L2015 | LC/UPC - LC/UPC Duplex OS2 Single Mode Ruggedized Armoured Fibre Optic Patch Cord PVC, 15m |
| 340-19OM1L2L2002 | LC/UPC - LC/UPC Duplex OM1 Multi Mode Ruggedized Armoured Fibre Optic Patch Cord PVC, 2m |
| 340-19OS2S1L1001 | SC/PC - LC/PC Duplex OS2 Single Mode Ruggedized Armoured Fibre Optic Patchcord PVC 1m |
| 340-19OS2S1S1001 | SC/PC - SC/PC Duplex OS2 Single Mode Ruggedized Armoured Fibre Optic Patchcord PVC 1m |

ORDERING GUIDE

| Patch Cord | Outer Jacket | Cable Dia. | Fibre Type | Connector | Polish | Connector | Polish | Length |
|----------------------|--------------|------------|----------------------|-----------|--------|-----------|--------|----------|
| 333 : Rugged Simplex | 1: PVC | 9:3.8mm | OM1 | S: SC | 1: PC | S: SC | 1: PC | 1m: 001 |
| 340 : Rugged Duplex | 2: LSZH | | OM2 | T: ST | 2: UPC | T: ST | 2: UPC | 2m: 002 |
| | 3: PE | | OM3 | F: FC | 3: APC | F: FC | 3: APC | 3m: 003 |
| | | | OM4 | L: LC | | L: LC | | 5m: 005 |
| | | | OS1 | M: MTRJ | | M: MTRJ | | 10m: 010 |
| | | | OS2 : G652.D/G657.A1 | E: E2000 | | E: E2000 | | 15m: 015 |
| | | | 7A1 = G657.A1 | | | | | |
| | | | 7A2 = G657.A2 | | | | | |
| | | | 7B2 = G657.B2 | | | | | |
| | | | 7B3 = G657.B3 | | | | | |
| | | 500 = G655 | | | | | | |