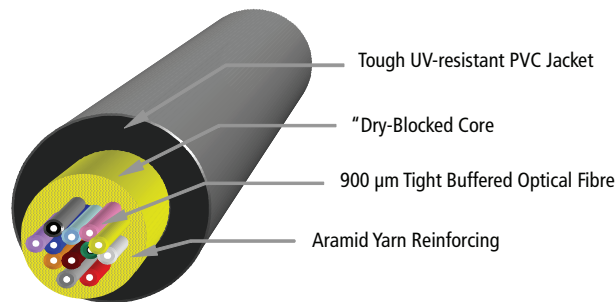


## Indoor Outdoor Optical Fibre Riser Cable

ROHS compliant Multifibre Riser cable constructed from 900 µm PVC Tight buffer jacketed fibres, stranded together with aramid yarn and flame retardant PVC sheathed for indoor versions or water-swellable aramid reinforcing and blocking yarns and typically over-sheathed with black UV- resistant and flame retardant PVC for indoor/outdoor versions. Sheath printing includes length marking at 1 m intervals. Options include LSZH sheath, alternative colours, any fibre type and up to 48 fibres.



### Applicable Specifications

AS/CA S008, IEC 60794, IEC 60793, AS1049, TIA/EIA 598-C & AS 3080

### Applications

The outdoor version of this tight buffer riser cable is the preferred selection for direct termination methods linking buildings such as around a campus extending the capability of conventional risers, used as backbones. It is intended for protected environments such as underground ducts between buildings, tunnels etc. It features a “dry” water blocking system to prevent the flow of water along the cable in the event of sheath breach, a UV-resistant jacket for temporary exposed situations, and it can accommodate all fibre types including different types within the same cable. LSZH sheathed options are available as are alternative colours. These are ideal for duct and indoor applications. Generally LSZH and non-black materials do not have the same high level of UV resistance as the standard offerings.

### Physical Characteristics

| SPECIFICATION                    | UNIT       | 4F        | 6F        | 8F        | 12F       | 24F       | 36F       | 48F       |
|----------------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cable Diameter                   | (mm)       | 5.8       | 6.2       | 6.8       | 6.6       | 8.2       | 9.5       | 10.7      |
| Cable Weight                     | (kg/km)    | 28        | 33        | 36        | 41        | 58        | 80        | 96        |
| Temperature Range                | (°C)       | -40 to 70 | -40 to 70 | -40 to 70 | -40 to 70 | -40 to 70 | -40 to 70 | -40 to 70 |
| Max Pulling Tension              | (N)        | 600       | 600       | 600       | 600       | 900       | 1100      | 1200      |
| Max. Crush Resistance            | (N/100 mm) | 500       | 500       | 500       | 500       | 500       | 500       | 500       |
| Long Term Crush                  | (N/100 mm) | 250       | 250       | 250       | 250       | 250       | 250       | 250       |
| Min. bending radius – under load | (mm)       | 120       | 124       | 136       | 144       | 160       | 190       | 210       |
| Min. bending radius – No load    | (mm)       | 89        | 93        | 102       | 108       | 120       | 143       | 163       |

Colour Code for fibres & tubes: Blue, Orange, Green, Brown, Grey, White, Red Black, Yellow, Violet, Pink, Aqua (\*Band-marking used to identify fibre-counts above 12)

Typical Sheath Colour Codes: Indoor Cables: Orange = 62.5 OM1, Aqua = 50 um OM3, Yellow = SM, Erika Violet = OM4

Indoor/Outdoor: Black

**Optical Characteristics**

- Single-mode Fibres

|                                    |                | <b>G652.D/G657.A</b>                                      |
|------------------------------------|----------------|---|
| Typical mode field diameter        | @1310 nm       | 9.2 ±0.4 µm / 8.9 ±0.4 µm<br>10.4 ±0.5 µm. / 10.0 ±0.5 µm |
| Cladding diameter                  |                | 125 ± 0.7 µm  |
| Max mode field concentricity error |                | 0.5 µm  |
| Cladding non-circularity           |                | ≤ 1%  |
| Fibre coating diameter             |                | 250 ±10 µm  |
| Group refractive Index             | @1310 nm       | 1.467   |
|                                    | @1550 nm       | 1.468   |
| Temperature Cycling                | (-60° + 85° C) | ≤ 0.05 dB/km  |
| 100 turns, 60 mm dia               | @1550 nm       | < 0.05 dB   |
|                                    | @1625 nm       | < 0.05 dB   |

|               | <b>ATTENUATION<br/>1310/1383/1550 NM<br/>(DB/KM)</b> | <b>ZERO DISP<sup>m</sup> WAVE-<br/>LENGTH (NM)</b> | <b>SLOPE AT ZDW<br/>(PS/NM<sup>2</sup>.KM)</b> | <b>TYP CH. DISP.<br/>1310/1550 NM<br/>(PS/NM.KM)</b> | <b>PMD<br/>(PS/KM)</b> |
|---------------|--|--|--|--|------------------------|
| G652.d/G657.a | Max 0.4/0.4/0.3                                      | 1302 -1322   | ≤ 0.090  | <3.5/<17   | 0.1                    |

- Multimode Fibres

|   | <b>62.5 µm (OM1)</b> | <b>50 µm (OM2)</b> | <b>50 µm (OM3)</b> | <b>50 µm (OM4)</b> |
|---|----------------------|--------------------|--------------------|--------------------|
| Typical Core diameter                                     | 62.5 ± 2.5           | 50.0 ± 2.5         | 50.0 ± 2.5         | 50.0 ± 2.5         |
| Max Core-Clad Conc Error (µm)                             | 1                    | 1                  | 1                  | 1                  |
| Cladding diameter (µm)                                    | 125 ± 1              | 125 ± 1            | 125 ± 1            | 125 ± 1            |
| Fibre Coating Diameter (Coloured) (µm)                    | 250 ± 10             | 250 ± 10           | 250 ± 10           | 250 ± 10           |
| Min G-Ethernet transmission distance at 850/1300 nm (m)   | 300/550              | 600/2000           | 1000/600           | 1040/600           |
| Min 10G-Ethernet transmission distance at 850/1310 nm (m) |                      |                    | 300/300            | 530/300            |

| <b>FIBRE TYPE</b> | <b>ATTENUATION<br/>850 NM<br/>(DB/KM)</b> | <b>ATTENUATION<br/>1300 NM<br/>(DB/KM)</b> | <b>MIN OVERFILLED<br/>BANDWIDTH 850 NM<br/>(MHZ.KM)</b> | <b>MIN OVERFILLED<br/>BANDWIDTH 1300 NM<br/>(MHZ.KM)</b> | <b>NUMERICAL<br/>APERTURE</b> |
|-------------------|---|--|---|--|-------------------------------|
| 62.5 µm (OM1)     | 3.0                                       | 1.0  | 220   | 500  | 0.275 ± 0.015                 |
| 50 µm (OM2)       | 3.0                                       | 1.0  | 500   | 500  | 0.20 ± 0.015                  |
| 50 µm (OM3)       | 3.0                                       | 1.0  | 1500  | 500  | 0.20 ± 0.015                  |
| 50 µm (OM4)       | 3.0                                       | 1.0  | 3500  | 500  | 0.20 ± 0.015                  |