OPTIMAL

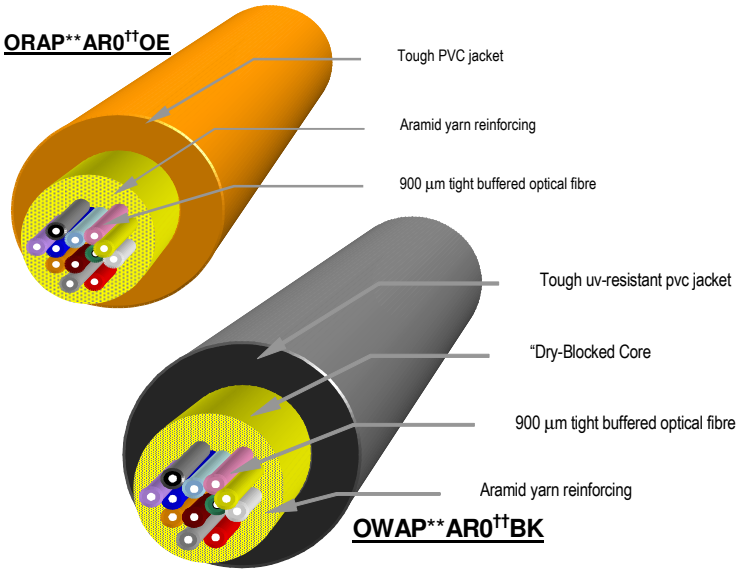
Cable Services Pty Ltd

TECHNICAL DATA SHEET

INDOOR OUTDOOR OPTICAL FIBRE RISER CABLE

Product Codes:

ORAPAR0††OE (Indoor)**
OWAPAR0††BK (Indoor/Outdoor)**
ORBPAR0††CM (Indoor LSZH)**
OWBPAR0††BK (Indoor/Outdoor LSZH)**



Description: ROHS compliant Multifibre Riser cable constructed from 900um PVC Tight buffer jacketed fibres, stranded together with aramid yarn and flame retardant PVC sheathed for indoor versions or "Dry-Block" water-swellable aramid reinforcing and blocking yarns, typically oversheathed 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/ACIF S008: 2006, 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 breech, 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:

Fibre count	4	6	8	12	16	24	36	48
• Nom. O.D. (mm)	5.8	6.2	6.8	7.2	7.5	8	9.5	10.5
• Nom. weight (kg/km)	28	33	36	41	52	58	80	96
• Operating Temperature (℃)	---------- -10 to +70 (indoor/outdoor) ----------							
	---------- 0 to +60 (indoor) ----------							
• Tensile Strength (N)	600	600	600	600	900	900	1100	1200
• Max. Crush resistance (N/100 mm)	500	500	500	500	500	500	500	500
• Long term Crush (N/100mm)	250	250	250	250	250	250	250	250
• Min. loaded bending radius (mm)	120	124	136	144	150	160	190	210
• Min. off load bending radius (mm)	89	93	102	108	113	120	143	163

Colour Sequence for fibres*:

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: Grey = 62.5 OM1, Orange = 50um OM2,
Aqua = 50 um OM3, Yellow = SM, Violet = OM4.144/7.2

Indoor/Outdoor : Black

** Represents any fibre code: L0=sm OS2, 1F = sm "Flex" (G657.a), 1C = sm, "ZWP" (G652.d), 62 = 62.5 um multimode (OM1), 50 = 50 um multimode (OM2), 53 = 50 um multimode (OM3), 55 = 50 um multimode (OM4)

†† Represents any fibre-count up to 48

Optical Characteristics

- **Single Mode Fibres**

	OS2 (L0)	**G652.d (1C)**	**G657.a (1F)**
Typical mode field diameter @1310nm @1550nm	9.2 ± 0.4µm 10.4 ± 0.5µm	9.2 ± 0.4µm 10.4 ± 0.5µm	8.9 ± 0.4µm 10 ± 0.5µm (typ.)
Cladding diameter	125 ± 2 µm	125 ± 0.7µm	125 ± 0.7µm
Max mode field concentricity error	0.8 µm	0.5 µm	0.5 µm
Cladding non-circularity	< 1%	≤ 1%	≤ 1%
Fibre coating diameter	250±10 µm	250±10 µm	250±10 µm
Tight buffer coating diameter	900±50 µm	900±50 µm	900±50 µm

	Attenuation @ 1310/1383/1550 nm (dB/km)	Zero dispersion Wavelength (nm)	Slope @ Zero Dispersion Wavelength (ps/nm².km)	PMD (ps/√km)
OS2	0.4/0.4/0.3 max 0.35/0.35/0.22 typical	1300 -1324	0.092	0.1
G652.d & G657.a	0.4/0.38/0.3 max 0.34/0.31/0.21 typical	1302 -1322	0.090	0.1

- **Multimode Fibres**

	62.5 µm (OM1) (62)	**50 µm (OM2) (50)**	**50 µm (OM3) (53)**	**50 µm (OM4) (55)**	**50 µm (OM3 Flex) (3F)**	**50 µm (OM4 Flex) (4F)**
Typical Core diameter (µm)	62.5 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5
Max Core-Clad Conc. Error (µm)	1	1	1	1	1	1
Cladding diameter (µm)	125 ± 1	125 ± 1	125 ± 1	125 ± 1	125 ± 1	125 ± 1
Fibre Coating Diameter (Coloured)(µm)	250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10
Tight buffer coating diameter (µm)	900±50	900±50	900±50	900±50	900±50	900±50
Min G-Ethernet transmission distance at 850/1300 nm(m)	275/550	550/550	920/600	970/600	920/600	970/600

Fibre Type	Attenuation 850 nm (dB/km)	Attenuation 1300 nm (dB/km)	Min Overfilled Bandwidth 850 nm (MHz.km)	Min Overfilled Bandwidth 1300 nm (MHz.km)	Numerical aperture
62.5 µm (OM1)	3.0	1.0	200	500	0.275 ± 0.015
50 µm (OM2)	3.0	1.0	500	500	0.200 ± 0.015
50 µm (OM3)	3.0	1.0	1500 (300m 10GigEthernet)	500	0.200 ± 0.015

50 µm (OM4)	3.0	1.0	3500 (500m 10GigEthernet)	500	0.200 ± 0.015
50 µm (OM3 Flex)	3.0	1.0	3500 (500m 10GigEthernet)	500	0.200 ± 0.015
50 µm (OM4 Flex)	3.0	1.0	3500 (500m 10GigEthernet)	500	0.200 ± 0.015

This datasheet is provided for guidance only and is subject to change without notice. Please ensure you have the most up to date information where parameters in this document are considered critical for your particular application.