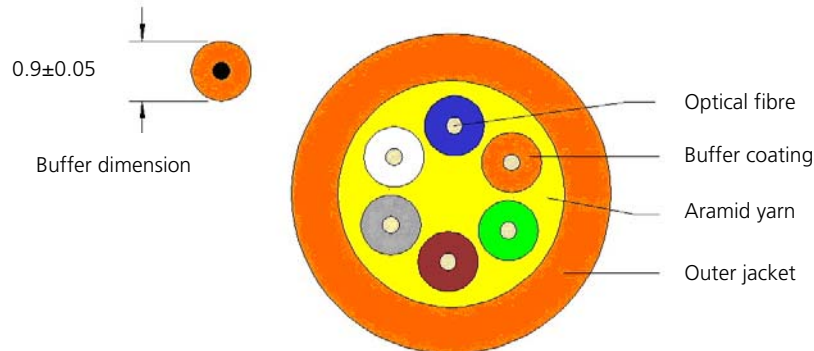


TrueNet®

Indoor Tight Buffer Optical Riser Cable

Issue 1



These cables are used for indoor applications and consist of 4 to 24 single-mode or multimode fibres.

For cables with a fibre count of 12 or less, the cable structure is as follows:

Surrounding the group of buffered fibres are aramid yarns to provide sufficient tensile strength to the cable, which effectively avoids damaging the cable during the installation, transport, operation etc. An outer sheath is then applied over the tight fibre/aramid assembly.

For cables with fibre counts of 24, the cable structure is as follows:

The cable comprises of 4 sub-units stranded around a FRP central strength member. These sub-units comprise of 6 fibres.

Surrounding the group of buffered fibres are aramid yarns to provide sufficient tensile strength to the cable, effectively avoiding damaging the cable during the installation, transports, operation etc. A sheath is then applied over the sub-unit, tight fibre/aramid assembly and sub units are ink jet printed with unique numbers (e.g. UNIT 1, UNIT2, etc at 300mm intervals) or different coloured to aid installation. The stranded assembly has a polyester tape and is then outer sheathed.

Features:

- Each fibre is coated to a 900 micron diameter, with a durable, protective material and the coating (buffer material).
- Each fibre is uniquely colour coded as defined in Table 1
- Available with PVC-OFNR or LSZH-FR sheaths
- The outer sheath has a flame retardant function, in either PVC or Low Smoke Zero Halogen (LSZH)
- RoHS compliant
- Available with PVC-OFNR or LSZH-FR sheaths

Compliances:

- ISO/IEC 11801, Types OS1, OM1, OM2 and OM3
- IEC 60794-1-2 Testing Methods
- ITU-T Recommendations G.652.D (Low water Peak) for OS1 singlemode
- ITU-T Recommendations G.651 for OM1, OM2 and OM3
- AS/ACIF S008 and AS/NZS 3080

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Specifications

General:

Outer sheath colours:
 62.5/125µm OM1 Multimode: Orange
 50/125µm OM2 Multimode: Orange
 50/125µm OM3 Multimode: Aqua
 9/125µm Singlemode: Yellow

Buffer diameter: 0.9±0.05mm
 Bend radius: ≥ 20 x Cable Diameter (Dynamic)
 ≥ 10 x Cable Diameter (Static)
 Tensile strength (Installation): 660N (4 to 12 core)
 1320N (24 core)
 Outer diameter: 4.8±0.2mm (4 core)
 4.8±0.2mm (6 core)
 5.4±0.2mm (8 core)
 6.2±0.2mm (12 core)
 14.5±0.5mm (24 core)
 Approx cable weight: 20kg/km (4 core)
 22kg/km (6 core)
 30kg/km (8 core)
 33kg/km (12 core)
 180kg/km (24 core)
 Crush resistance: 500N/10cm
 Operating temperature: -20 to +50°C (PVC)
 -0 to +50°C (LSZH)
 Drum length: 2000m (-0, +5%) (4 to 12 core)
 1000m (-0, +5%) (24 core)

Singlemode:

Material: Silica/Germanium doped silica
 Index Profile: Step Index, Matched Cladding
 Cladding diameter: 125±1µm
 Cladding Non-Circularity error: <0.7%
 Core / Cladding concentricity error: ≤0.3µm
 Mode Field Diameter @ 1310nm: 9.2±0.4µm
 Maximum attenuation (un-cabled): ≤0.35db/km @1310nm
 ≤0.22db/km @1550nm
 Maximum attenuation (indoor cabled): ≤0.70db/km @1310nm
 ≤0.70db/km @1550nm
 Chromatic dispersion: ≤3.5ps/(nm.km) In the range 1170 to 1280nm
 ≤18ps/(nm.km) at 1550nm
 Cut-off wavelength "λc": 1170 to 1280nm
 Cabled cut-off wavelength "λcc": ≤ 1260nm
 Zero dispersion wavelength (λ_o): 1302 to 1322ps/(nm².km)
 Zero Dispersion Slope (S_o): ≤ 0.093ps/(nm².km)
 Polarisation mode dispersion coefficient (PMD): ≤ 0.5ps/√km
 Effective Group Index: 1.4675@1310nm
 1.4681@1550nm

Multimode 62.5µm OM1:

Material:	Doped Silica / Silica
Index Profile:	Graded Index
Core diameter:	62.5±3µm
Core Non-Circularity error:	≤5%
Cladding diameter:	125±2µm
Cladding Non-Circularity error:	≤2%
Core / Cladding concentricity error:	≤1µm
Coating/Cladding concentricity:	≤12µm
Maximum attenuation (un-cabled):	≤3.0db/km @850nm
	≤0.70db/km @1300nm
Maximum attenuation (indoor cabled):	≤3.5db/km @850nm
	≤1.5db/km @1300nm
Zero dispersion wavelength (λ ₀):	1343±11nm
Zero Dispersion Slope (S ₀):	≤ 0.097ps/(nm ² .km)
Numerical aperture):	0.275±0.015
Bandwidth:	≥200Mhz.km @ 850nm
	≥500Mhz.km @ 1300nm
Effective group index:	1.496 @ 850nm
	1.491 @ 1300nm

Multimode 50µm OM2:

Material:	Doped Silica / Silica
Index Profile:	Graded Index
Core diameter:	50±3µm
Core Non-Circularity error:	≤5%
Cladding diameter:	125±2µm
Cladding Non-Circularity error:	≤2%
Core / Cladding concentricity error:	≤1µm
Coating/Cladding concentricity:	≤12µm
Maximum attenuation (un-cabled):	≤2.5db/km @850nm
	≤0.80db/km @1300nm
Maximum attenuation (indoor cabled):	≤3.5db/km @850nm
	≤1.5db/km @1300nm
Zero dispersion wavelength:	1310±10nm
Zero Dispersion Slope:	≤ 0.101ps/(nm ² .km)
Numerical aperture):	0.200±0.015
Bandwidth:	≥500Mhz.km @ 850nm overfilled LED
	≥500Mhz.km @ 1300nm overfilled LED
Effective group index:	1.482 @ 850nm
	1.477 @ 1300nm

Multimode 50µm OM3:

Material:	Doped Silica / Silica
Index Profile:	Graded Index
Core diameter:	50±3µm
Core Non-Circularity error:	≤5%
Cladding diameter:	125±2µm
Cladding Non-Circularity error:	≤2%
Core / Cladding concentricity error:	≤1µm
Coating/Cladding concentricity:	≤12µm
Maximum attenuation (un-cabled):	≤2.5db/km @850nm
	≤0.80db/km @1300nm
Maximum attenuation (indoor cabled):	≤3.5db/km @850nm
	≤1.5db/km @1300nm
Zero dispersion wavelength:	1310±10nm

Zero Dispersion Slope:..... ≤ 0.101ps/(nm².km)
 Numerical aperture): 0.200±0.015
 Bandwidth: ≥1500Mhz.km @ 850nm overfilled LED
 ≥500Mhz.km @ 1300nm overfilled LED
 ≥2000Mhz.km @ 850nm Laser
 Effective group index: 1.482 @ 850nm
 1.477 @ 1300nm

Table 1 – Colour coding of the Buffered Fibres

Element No.	1	2	3	4	5	6
Colour	Blue	Orange	Green	Brown	Grey	White
Element No.	7	8	9	10	11	12
Colour	Red	Black	Yellow	Violet	Pink	Aqua

Ordering Information

Description	Quantity	Colour	Product No.
Indoor 62.5µm OM1 Multimode, 4-core, PVC-OFNR	Per metre	Orange	6004INHCBC062
Indoor 62.5µm OM1 Multimode, 6-core, PVC-OFNR	Per metre	Orange	6006INHCBC062
Indoor 62.5µm OM1 Multimode, 8-core, PVC-OFNR	Per metre	Orange	6008INHCBC062
Indoor 62.5µm OM1 Multimode, 12-core, PVC-OFNR	Per metre	Orange	6012INHCBC062
Indoor 62.5µm OM1 Multimode, 24-core, PVC-OFNR	Per metre	Orange	6024INHCBC062
Indoor 50µm OM2 Multimode, 4-core, PVC-OFNR	Per metre	Orange	6024INHCBC050
Indoor 50µm OM2 Multimode, 6-core, PVC-OFNR	Per metre	Orange	6006INHCBC050
Indoor 50µm OM2 Multimode, 8-core, PVC-OFNR	Per metre	Orange	6008INHCBC050
Indoor 50µm OM2 Multimode, 12-core, PVC-OFNR	Per metre	Orange	6012INHCBC050
Indoor 50µm OM2 Multimode, 24-core, PVC-OFNR	Per metre	Orange	6024INHCBC050
Indoor 50µm OM3 Multimode, 4-core, PVC-OFNR	Per metre	Aqua	6004INHCBC050U
Indoor 50µm OM3 Multimode, 6-core, PVC-OFNR	Per metre	Aqua	6006INHCBC050U
Indoor 50µm OM3 Multimode, 8-core, PVC-OFNR	Per metre	Aqua	6008INHCBC050U
Indoor 50µm OM3 Multimode, 12-core, PVC-OFNR	Per metre	Aqua	6012INHCBC050U
Indoor 50µm OM3 Multimode, 24-core, PVC-OFNR	Per metre	Aqua	6024INHCBC050U

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Indoor Tight Buffer Optical Riser Cable

Ordering Information

Description	Quantity	Colour	Product No.
Indoor 9µm Singlemode, 4-core, PVC-OFNR	Per metre	Yellow	6004INHCB010
Indoor 9µm Singlemode, 6-core, PVC-OFNR	Per metre	Yellow	6006INHCB010
Indoor 9µm Singlemode, 8-core, PVC-OFNR	Per metre	Yellow	6008INHCB010
Indoor 9µm Singlemode, 12-core, PVC-OFNR	Per metre	Yellow	6012INHCB010
Indoor 9µm Singlemode, 24-core, PVC-OFNR	Per metre	Yellow	6024INHCB010
Indoor 62.5µm OM1 Multimode, 4-core, LSZH-FR	Per metre	Orange	6004LZHIOC062
Indoor 62.5µm OM1 Multimode, 6-core, LSZH-FR	Per metre	Orange	6006LZHIOC062
Indoor 62.5µm OM1 Multimode, 8-core, LSZH-FR	Per metre	Orange	6008LZHIOC062
Indoor 62.5µm OM1 Multimode, 12-core, LSZH-FR	Per metre	Orange	6012LZHIOC062
Indoor 62.5µm OM1 Multimode, 24-core, LSZH-FR	Per metre	Orange	6024LZHIOC062
Indoor 50µm OM2 Multimode, 4-core, LSZH-FR	Per metre	Orange	6004LZHIOC050
Indoor 50µm OM2 Multimode, 6-core, LSZH-FR	Per metre	Orange	6006LZHIOC050
Indoor 50µm OM2 Multimode, 8-core, LSZH-FR	Per metre	Orange	6008LZHIOC050
Indoor 50µm OM2 Multimode, 12-core, LSZH-FR	Per metre	Orange	6012LZHIOC050
Indoor 50µm OM2 Multimode, 24-core, LSZH-FR	Per metre	Orange	6024LZHIOC050
Indoor 50µm OM3 Multimode, 4-core, LSZH-FR	Per metre	Aqua	6004LZHIOC050U
Indoor 50µm OM3 Multimode, 6-core, LSZH-FR	Per metre	Aqua	6006LZHIOC050U
Indoor 50µm OM3 Multimode, 8-core, LSZH-FR	Per metre	Aqua	6008LZHIOC050U
Indoor 50µm OM3 Multimode, 12-core, LSZH-FR	Per metre	Aqua	6012LZHIOC050U
Indoor 50µm OM3 Multimode, 24-core, LSZH-FR	Per metre	Aqua	6024LZHIOC050U
Indoor 9µm Singlemode, 4-core, LSZH-FR	Per metre	Yellow	6004LZHIOC010
Indoor 9µm Singlemode, 6-core, LSZH-FR	Per metre	Yellow	6006LZHIOC010
Indoor 9µm Singlemode, 8-core, LSZH-FR	Per metre	Yellow	6008LZHIOC010
Indoor 9µm Singlemode, 12-core, LSZH-FR	Per metre	Yellow	6012LZHIOC010
Indoor 9µm Singlemode, 24-core, LSZH-FR	Per metre	Yellow	6024LZHIOC010

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