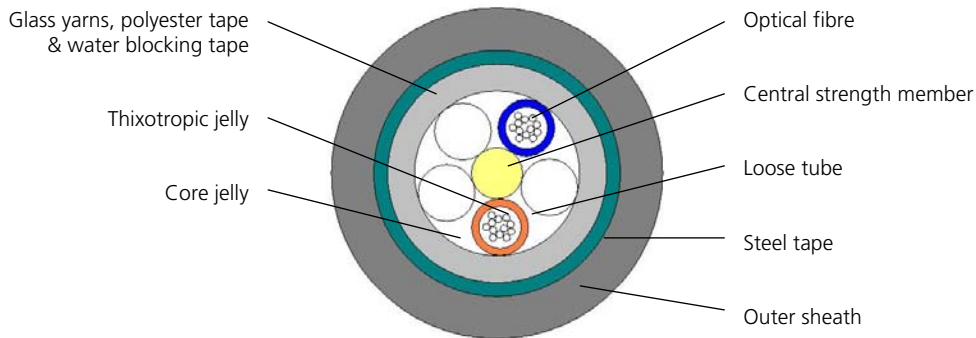


TrueNet®

Outdoor Loosetube Optical Cable, Armoured, HDPE Sheath

Issue 2



This cable is constructed of loose tubes and fillers (if required).

The elements are SZ stranded around a non-metallic central strength member (FRP) and are retained by two, contra-helically applied binders.

The loose tubes manufactured from high strength, low shrinkage PBT compound, and contain the optical fibres (the fibre colour sequence shown in Table 1). The loose tubes also contain a thixotropic jelly, to prevent water penetration and protect the fibres against shock.

The filler elements are manufactured from black PE to the same outside diameter as the loose tubes. The cable core is filled with a jelly to prevent ingress of water and the core is wrapped with a longitudinally applied polyester tape, retained with a helical binder.

For mechanical performance, glass yarns are positioned over the polyester tape, and water swellable tape applied over the glass yarn. A corrugated steel tape (0.15mm thick and with a 0.05mm copolymer coating on both sides) is applied longitudinally over cable core.

The cable is sheathed with a U.V. stabilized HDPE compound with nominal thickness of 1.8mm.

Features:

- Each fibre is uniquely colour coded as defined in Table 1
- RoHS compliant

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:

Cable diameter:	11.7mm
Bend radius:	≥ 20 x Cable Diameter (Dynamic) ≥ 10 x Cable Diameter (Static)
Central strength member:	2.7mm diameter
Tensile strength:	2700N (Short term) 810N (Long term)
Approx cable weight:	112kg/km
Crush resistance:	2200N/10cm
Operating temperature:	-40 to +70°C
Drum length:	2000m (-0, +5%)

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 (loosetube cabled):	≤0.36db/km @1310nm ≤0.22db/km @1550nm
Chromatic dispersion:	≤3.5ps/(nm.km) In the range 1170 to 1280nm ≤18ps/(nm.km) at 1550nm
Cut-off wavelength "λ _c ":	1170 to 1280nm
Cabled cut-off wavelength "λ _{cc} ":	≤ 1260nm
Zero dispersion wavelength (λ _o):	1302 to 1322ps/(nm ² .km)
Zero Dispersion Slope (S _o):	≤ 0.093ps/(nm ² .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 _o):	1343±11nm
Zero Dispersion Slope (S _o):	≤ 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/(nm ² .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.
Outdoor 62.5µm OM1 Multimode Armoured Loosetube HDPE Cable, 4-core	Per metre	Black	Q004LTSDAR062AP
Outdoor 62.5µm OM1 Multimode Armoured Loosetube HDPE Cable, 6-core	Per metre	Black	Q006LTSDAR062AP
Outdoor 62.5µm OM1 Multimode Armoured Loosetube HDPE Cable, 8-core	Per metre	Black	Q008LTSDAR062AP
Outdoor 62.5µm OM1 Multimode Armoured Loosetube HDPE Cable, 12-core	Per metre	Black	Q012LTSDAR062AP
Outdoor 62.5µm OM1 Multimode Armoured Loosetube HDPE Cable, 24-core	Per metre	Black	Q024LTSDAR062AP
Outdoor 50µm OM2 Multimode Armoured Loosetube HDPE Cable, 4-core	Per metre	Black	Q004LTSDAR050AP
Outdoor 50µm OM2 Multimode Armoured Loosetube HDPE Cable, 6-core	Per metre	Black	Q006LTSDAR050AP
Outdoor 50µm OM2 Multimode Armoured Loosetube HDPE Cable, 8-core	Per metre	Black	Q008LTSDAR050AP
Outdoor 50µm OM2 Multimode Armoured Loosetube HDPE Cable, 12-core	Per metre	Black	Q012LTSDAR050AP
Outdoor 50µm OM2 Multimode Armoured Loosetube HDPE Cable, 24-core	Per metre	Black	Q024LTSDAR050AP
Outdoor 50µm OM3 Multimode Armoured Loosetube HDPE Cable, 4-core	Per metre	Black	Q004LTSDAR050UAP
Outdoor 50µm OM3 Multimode Armoured Loosetube HDPE Cable, 6-core	Per metre	Black	Q004LTSDAR050UAP
Outdoor 50µm OM3 Multimode Armoured Loosetube HDPE Cable, 8-core	Per metre	Black	Q004LTSDAR050UAP
Outdoor 50µm OM3 Multimode Armoured Loosetube HDPE Cable, 12-core	Per metre	Black	Q004LTSDAR050UAP
Outdoor 50µm OM3 Multimode Armoured Loosetube HDPE Cable, 24-core	Per metre	Black	Q004LTSDAR050UAP
Outdoor 9µm Singlemode Armoured Loosetube HDPE Cable, 4-core	Per metre	Black	Q004LTSDAR010AP
Outdoor 9µm Singlemode Armoured Loosetube HDPE Cable, 6-core	Per metre	Black	Q006LTSDAR010AP
Outdoor 9µm Singlemode Armoured Loosetube HDPE Cable, 8-core	Per metre	Black	Q008LTSDAR010AP
Outdoor 9µm Singlemode Armoured Loosetube HDPE Cable, 12-core	Per metre	Black	Q012LTSDAR010AP
Outdoor 9µm Singlemode Armoured Loosetube HDPE Cable, 24-core	Per metre	Black	Q024LTSDAR010AP
Outdoor 9µm Singlemode Armoured Loosetube HDPE Cable, 96-core	Per metre	Black	Q096LTSDAR010AP

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