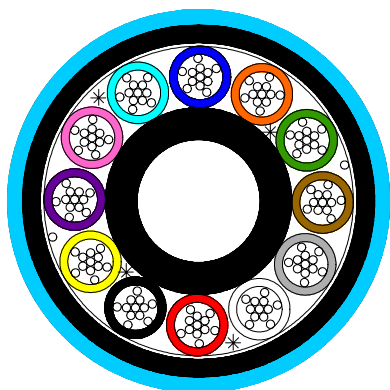


MINISM@RT LOOSETUBE

External Mini Loose Tube Optical Cable for use in micro ducts

Cable Design

**IEC 60794-5
ACMA - AS/CA S008**



- Drawing not to scale -

- **Multi-loose tube construction** – Single layer 2 to 144 fibres
- **Central strength member (CSM):** Glass fibre reinforced plastic material (GRP) with or without over-sheathing
- **Tube:** Thermoplastic material, containing up to 12 optical fibres filled with a low viscosity, thixotropic, non-melting gel fully compatible with fibre coating and tube material
- **Stranding:** The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member
- **Longitudinal water tightness:** Water swellable elements (dry-core)
- **Sheath:** UV stabilised polyethylene in compliance with AS 1049. Two ripcords provided beneath the sheath for easy removal
- **Outer jacket:** UV stabilised polyamide (Nylon) in compliance with AS 1049 integrally bonded to PE sheath

This loose tube dielectric optical cable is designed for external underground installations in (micro) ducts by pulling, blowing or floating techniques. Polyamide provides anti-termite protection. Optimised for blowing in mini ducts of 10mm diameter (internal).

Technical data

Number of Fibres		2 to 72	96	144
Number of elements		6	8	12
Tube / Filler diameter	mm	1.55		1.35
Cable nominal diameter	mm	6.3	7.4	8.4
Cable nominal weight	kg/km	33	49	62
Max. installation tension	kN	0.8	1.1	2.0
Max. crush resistance	kN/100mm	1.0	1.5	2.0
Min. bending radius				
At full load		130	220	220
At no load	mm	65	110	110
Temperature range	°C	Installation -0 -> +50	Transport & Storage -20 -> +70	Operation -10 -> +70

Optical Characteristics

See the attached cabled optical fibre data sheet.

Identification

Fibre and Buffer Tube Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	blue	orange	green	brown	grey	white	red	black	yellow	violet	pink	aqua

Fillers are either natural (opaque) or black.

Sheath Colour:

The outer sheath colour is blue.

Sheath Marking:

The outer sheath is marked in 1 metre intervals as follows:

PRYSMIAN DW MINISM@RT DUCT Part Number T/N ##### MM/YY MADE IN AUSTRALIA *****M >> | << *****M

Main mechanical characteristicsp

Parameter	Test method	Test conditions	Acceptance criteria*
Tensile strength	IEC 60794-1-21-E1 Figure 2	Load: As per cable maximum tensile strength in table above.	After 30 minutes the maximum strain on the fibre should not exceed 0.6% and no attenuation increase occurs after test
Crush	IEC 60794-1-21-E3	Short time: 10 min Load: As per maximum crush resistance in table below Number of positions: 3 adjacent sections (ensuring one over tube and one over lay reversal)	No damage to the sheath or to the core structure and no attenuation increase occurs after test
Impact	IEC 60794-1-21-E4	Weight: 1.0 kg Height: 0.1 m Anvil radius: 300 mm Impacts: 3	After 5 minutes no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase occurs after test
Torsion	IEC 60794-1-21-E7	Sample length: 1 m Rotation: a) 180° clockwise, b) return to starting position, c) 180° anticlockwise, d) return to starting position. Four movements constitute one cycle. Complete 10 cycles (a to d) in one minute maximum	During the final tenth cycle at a), c) and after completion (no rotation) check transmitting fibres. No fibre breaks, no damage to the sheath or to the core structure and no attenuation change throughout test
Bend	IEC 60794-1-21-E11	Mandrel radius: As per Min. bending radius at no load stated in technical data Bend: 360°, 5 turns, 3 cycles	No attenuation change throughout test
Bend under tension	Concurrent to tensile test IEC 60794-1-21-E18A	Mandrel radius: As per Min. bending radius at full load state in technical data Bend: 360°, 1turn	After 1minute no fibre breaks, no damage to the sheath or to the core structure and no attenuation change throughout test
Temperature cycling	IEC 60794-1-22-F1	Sample length: 1000 m (minimum) Temperature range: - 10 °C to +70 °C	No individual fibre should measure an attenuation greater than 0.15 dB/km
Water penetration	IEC 60794-1-22-F5B	Sample length=3m, Water height=1m	No water leakage after 24 hour

* All optical measurements for singlemode fibres performed at 1550 nm.

Logistic

Packing:

Timber drums to AS/NZS 2857 with NOLCO-FLEX protection

Delivery Lengths:

Standard delivery length is 4 km with a tolerance of - 1% / + 3%

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All sizes and values without tolerances are reference values. Specifications are for product as supplied by PrysmianGroup: any modification or alteration afterwards of product may give different result.

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