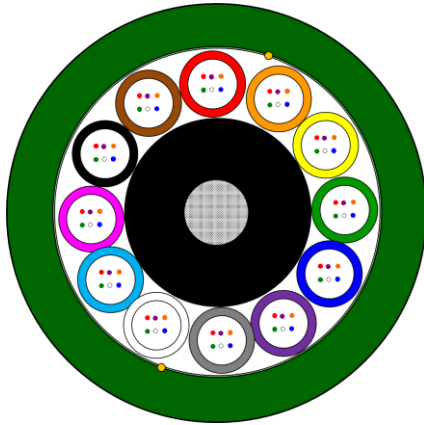


JN-SM-LRE stranded loose tube mini cables for use in ducts

Cable Design

DRAFT



- not to scale -

- **Optical fibre:** see specification.
- **Secondary coating:** The fibres are, uniquely identified by a different colour, placed inside 'loose tubes' made of high tensile strength thermoplastic compound.
- **Gel compound:** The tubes are fully filled with a non-toxic and dermatological safe gel compound.
- **Central Strength Member (CSM):** The central element consists of FRP (Fibre Reinforced Plastic), with a water-swellable layer.
- **Cable core:** The required number of tubes (and dummy elements) are stranded (SZ method) around the central element.
- **Strength members:** Under the outer sheath 2 aramid yarns are applied, serving as ripcord and as strengthening yarns.
- **Outer sheath:** HDPE.

This loose tube dielectric optical cable is designed for outdoor installation in ducts and micro ducts by blowing or pulling techniques.

Technical data

No. of Fibres		24		
Design		12x2		
Loose Tube- Ø	mm	0.9		
Sheath thickness, nom.	mm	0.5		
Cable Diameter, nom.	mm	5.6		
Operation	daN	15		
Installation	daN	54		
Cable Weight	kg / km	27		
Min. bending radius	mm	Without Tension 15 x Cable-Ø		Under Maximum Tension 25 x Cable-Ø
Temperature range	°C	Installation -10 to +50	Transport. & Storage -40 to +70	Operation -40 to +70

Main characteristics

Test	Standard	Specified value	Acceptance Criteria**
Tensile performance	IEC 60794-1-2-E1	See table above	$\Delta\alpha \leq 0.05\text{dB}$ $\Delta\alpha$ reversible
Crush	IEC 60794-1-2-E3	1000N, 100mm plate/plate 1min.	$\Delta\alpha \leq 0.05$ dB after test, no damage
Impact	IEC 60794-1-2-E4	3 Nm, R=300mm, 3 impacts	$\Delta\alpha \leq 0.05$ dB after test, no damage
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ$, L=1m, 10 cycles	No damage
Kink	IEC 60794-1-2-E10	Min diameter=100mm	No damage
Repeated bending	IEC 60794-1-2-E6	R= 15x cable Ø, 100 cycles, 10N	No damage
Cable bend	IEC 60794-1-2-E11	R= 10x cable Ø, 5 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB, No damage
Temperature range	IEC 60794-1-2-F1	-30 to +60°C -40 to +70°C	$\Delta\alpha \leq 0.05$ dB $\Delta\alpha \leq 0.15$ dB
Water Penetration	IEC 60794-1-2-F5B	sample=1m, water=1m	No water leakage after 24 hour

** values for single-mode fibres, all optical measurements performed at 1550 nm.

Optical Characteristics

See the attached cabled optical fibre data sheet(G.657A1).

Identification

Fibre Colours

No.	1	2
Colour	Black	Brown

Loose Tube Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	black	brown	red	orange	yellow	green	blue	violet	grey	white	aqua	pink
12 x 2	BK2T	BR2T	RD2T	OR2T	YE2T	GR2T	BL2T	VI2T	GY2T	WH2T	TQ2T	PK2T

Where: *BKxT*=Black tube with x fibres, *BRxT*=Brown tube with x fibres, *RDxT*=Red tube with x fibres, *ORxT*=Orange tube with x fibres, *YExT*=Yellow tube with x fibres, *GRxT*=Green tube with x fibres, *BLxT*=Blue tube with x fibres, *VIxT*=Violet tube with x fibres, *GYxT*=Grey tube with x fibres, *WHxT*=White tube with x fibres, *RDxT*=Red tube # with x fibres, *PKxT*=Pink tube # with x fibres

#- black ring

Sheath Colour:

The colour is green.

Sheath Marking:

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

PROXIMUS 85802402- 24Fib G.657.A1 - 15 daN - DRAKA 60091668 - TC05728 - mmmmM

Where: <customer ID> - customer identification number, nnn - fibre count, <fibre type> - eg. G657A1, <SAP code> - Prysmian SAP code, mmmm - sequential length mark, fff- Operation load

Logistic

Packing:

Plastic or Plywood Drums with protection.

Delivery Lengths:

Standard delivery length is 4km, 6 km with a tolerance of - 1% / + 3%

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