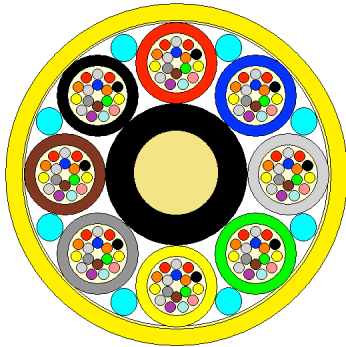


Stranded loose tube micro cables for use in ducts

Cable Design

IEC/EN 60794



- not to scale -

- **Fibres:** see datasheet CFS09011 for G.657.A1
- **Central Strength Member (CSM):** glass fibre reinforced plastic rod (FRP) with plastic oversheathing when needed.
- **Loose Tube:** thermoplastic material, containing optical fibres and filled with a suitable water tightness compound.
- **Filler Elements:** thermoplastic rods, where needed.
- **Stranding:** loose tubes (and fillers), SZ stranded around the CSM.
- **Longitudinal Water Tightness:** dry core with water swellable elements.
- **Peripheral Strength Elements:** aramid yarns.
- **Outer Sheath:** PE, two ripcords beneath.

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

Technical data

No. of Fibres		192		
Design (no. tubes x fibres/tube)		8 x 24		
Cable Diameter	mm	7.9		
Cable Weight	kg / km	61		
Tensile strength	N	1000		
Minimum Bending Radius	mm	Without Tension 15 x Cable-Ø		Under Maximum Tension 25 x Cable-Ø
Temperature Range	°C	Installation -15 to +40	Transport & Storage -40 to +70	Operation -40 to +60

Please refer to our General Installation, Safety & Handling recommendations before handling.

Main characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile strength	IEC 60794-1-2-E1	See table above	$\Delta\alpha \leq 0.05$ dB, fibre strain $\leq 0.33\%$
Crush	IEC 60794-1-2-E3	500 N / 100mm plate/plate 1 min 1000 N / 100 mm plate/plate 1 min	$\Delta\alpha \leq 0.05$ dB during test, no damage $\Delta\alpha \leq 0.05$ dB after test, no damage
Impact	IEC 60794-1-2-E4	5 Nm, 3 impacts, R= 300 mm	no damage
Repeated Bending	IEC 60794-1-2-E6	R=15xD, 20 N, 100 cycles	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	$\Delta\alpha \leq 0.05$ dB, no damage
Cable Bend	IEC 60794-1-2-E11	D=250mm, 5 turns, 3 cycles, -10°C	$\Delta\alpha \leq 0.05$ dB, no damage
Temperature range	IEC 60794-1-2-F1	-30 to +60°C -40 to +70°C	$\Delta\alpha \leq 0.05$ dB/km $\Delta\alpha \leq 0.15$ dB/km
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water column=1m	no water leakage in 24h

All optical measurements at 1550 nm.

Optical Characteristics

See the attached cabled optical fibre data sheet.

Identification

Fibre Colours

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

No.	13	14	15	16	17	18	19	20	21	22	23	24
Colour	red ¹	blue ¹	white ¹	green ¹	yellow ¹	grey ¹	brown ¹	white ²	violet ¹	orange ¹	aqua ¹	pink ¹

<colour>¹ with evenly spaced black ring marks

<colour>² with evenly spaced double black ring marks

Buffer Tube Colours

No.	1	2	3	4	5	6	7	8
Colour	red	blue	white	green	yellow	grey	brown	black

Sheath Colour:

The outer sheath colour is yellow.

Sheath Marking:

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

**RALA DRAKA(SR) JN-SM-Versa XS / GRHLDV <fibre count> x <fibre type> S12
Idno.<cable ID> <year> <length marking>m**

Logistic

Packing:

Plastic or plywood drums with protection.

Delivery Length:

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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