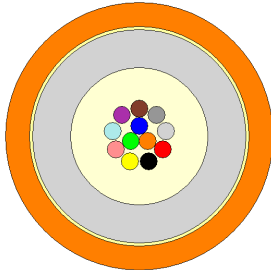


Unitube Mini Cables for use in Ducts

Cable Design

IEC/EN 60794



- not to scale -

- **Optical Fibres:** multimode fibres.
- **Loose Tube:** thermoplastic material filled with a suitable water tightness compound. The fibres are uniquely identified by a different colour and grouped in 12 fibre groups with a coloured yarn.
- **Strength members:** are applied in the cable.
- **Outer sheath:** consists of a special high-density polyethylene compound.

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

Technical data

No. of Fibres		2	4	6	8	12	24
Cable Diameter	mm				3.9		
Cable Weight	kg / km				12.5		
Tensile Performance	N				150		
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 -20 to +60	

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

Main characteristics

Test	Standard	Specified value	Acceptance Criteria ⁽³⁾
Tensile Performance	IEC 60794-1-2-E1	See table above.	$\Delta\alpha \leq 0.5$ dB
Crush	IEC 60794-1-2-E3	1000N, 100mm plate/plate 1min.	$\Delta\alpha \leq 0.5$ dB, no damage
Impact	IEC 60794-1-2-E4	5 Nm, R=200mm, 3 impacts	no damage
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ$, L=1m, 10 cycles	$\Delta\alpha \leq 0.5$ dB, no damage
Kink	IEC 60794-1-2-E10	min diameter=15 x cable Ø	no damage
Repeated bending	IEC 60794-1-2-E6	R=15 x cable Ø, 100 cycles, 20N	no damage
Cable bend	IEC 60794-1-2-E11	R=10 x cable Ø, 5 turns, 3 cycles ⁽²⁾	$\Delta\alpha \leq 0.5$ dB, no damage
Temperature range ⁽³⁾	IEC 60794-1-2-F1	-20 to +60°C -30 to +70°C	$\Delta\alpha \leq 0.5$ dB/km $\Delta\alpha$ reversible
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water=1m	no water leakage after 24h

⁽¹⁾ at room temperature $23^\circ\text{C} \pm 2^\circ\text{C}$ ⁽²⁾ temperature cycling test shall be performed on cable coil (without drum)

⁽³⁾ all optical measurements at 1300 nm.

Optical Characteristics

See the attached cabled optical fibre data sheet for multimode fibre.

Identification

Fibre Colours

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

Yarn Colouring

No.	1	2
Colour	red	white
		

Sheath Colour:

The outer sheath colour is orange.

Sheath Marking:

The outer sheath is marked in 1 meter intervals as follows

<Manufacturer> JN-URE <year> OPTICAL CABLE <fibre count> x <fibre type> <length marking>

Logistic

Packing:

Plastic or plywood drums with protection.

Delivery Lengths:

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

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