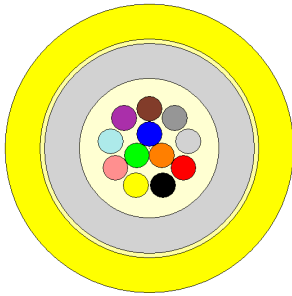


Unitube Mini Cables for use in Microducts

Cable Design

IEC/EN 60794



- not to scale -

- **Fibres:** see datasheet CFS09011 for G.657.A1 and CFS09003 for G.657.A2.
- **Loose Tube:** thermoplastic material, containing up to 12 fibres and filled with a suitable gel compound.
- **Water Tightness:** fully watertight construction.
- **Strength members:** aramid yarns are applied in the cable.
- **Outer sheath:** high-density polyethylene compound, halogen free.

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

Technical data

No. and Type of Fibres		2 x G.657.A2	4 x G.657.A2	12 x G.657.A1	12 x G.657.A2
Design		1 x 2	1 x 4	1 x 12	
Cable Diameter	mm	2.9		3.2	
Cable Weight	kg / km	6.8		8.2	

Main characteristics

Test	Standard	Specified value	Acceptance Criteria ⁽³⁾
Tensile Performance	IEC 60794-1-2-E1	250N	$\Delta\alpha \leq 0.05$ dB
Crush	IEC 60794-1-2-E3	1250N, 100mm plate/plate 1min.	$\Delta\alpha \leq 0.05$ dB
Impact	IEC 60794-1-2-E4	3 Nm, R=200mm, 3 impacts	$\Delta\alpha \leq 0.05$ dB
Repeated bending	IEC 60794-1-2-E6	R= 15x cable Ø, 100 cycles, 20N	$\Delta\alpha \leq 0.05$ dB
Cable bend	IEC 60794-1-2-E11	R= 10x cable Ø, 5 turns, 3 cycles ⁽¹⁾	$\Delta\alpha \leq 0.05$ dB
Temperature range ⁽²⁾	IEC 60794-1-2-F1	-30 to +60°C -40 to +70°C	$\Delta\alpha \leq 0.05$ dB/km $\Delta\alpha$ reversible
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water=1m	no water leakage after 24h
Min. bending radius	mm	Without Tension 10 x Cable-Ø	Under Maximum Tension 25 x Cable-Ø
Temperature range	°C	Installation -15 to +50	Transport. & Storage -40 to +70 Operation -40 to +60

⁽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 1550 nm.

Optical Characteristics

See attached cabled optical fibre data sheet for G.657.A1 and G.657.A2 fibres.

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

Sheath Colour:

The outer sheath colour is yellow.

Sheath Marking:

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

RALA DRAKA(DL) JN-SM-URE<dd>/GAGLDV <fibre count> x <fibre type> S12
Idno.<cable ID> <year> <length marking>m

<dd>: cable diameter in tenths of millimetre

Logistic

Packing:

Plastic or Plywood drums with protection

Delivery Lengths:

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

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