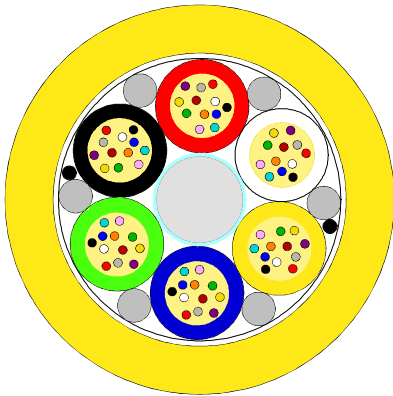


stranded loose tube mini cables for use in ducts

Cable Design



- not to scale -

- **Secondary coating:** The fibres are, uniquely identified by a different colour, placed inside 'loose tubes' made of high tensile strength thermoplastic compound. For fibre counts above 12 in a tube, a coloured bundle yarn is used.
- **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
- **Fillers:** between stranded tubes and sheath to improve mechanical characteristics.
- **Outer sheath:** PE

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		12	24	36	48	60	72	96	144
Design		n x 12							6 x 24
Loose Tube- Ø	mm	1.65							2.3
Sheath thickness nom.	mm	0.4							
Cable Diameter	mm	6.0						7.1	8.0
Cable Weight	kg / km	32						46	64
Tensile Performance		500						800	800

Main characteristics

Test	Standard	Specified value	Acceptance Criteria**
Tensile performance	IEC 60794-1-2-E1	See table above	$\Delta\alpha \leq 0.05$ dB
Crush	IEC 60794-1-2-E3	1000N, 100mm plate/plate 1min.	$\Delta\alpha \leq 0.05$ dB, no damage
Impact	IEC 60794-1-2-E4	2 Nm, R=200mm, 3 impacts	$\Delta\alpha \leq 0.05$ dB, no damage
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ$, L=1m, 10 cycles	$\Delta\alpha \leq 0.05$ dB, 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, 20N	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 $\Delta\alpha \leq 0.10$ dB
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water=1m	No water leakage after 24 hour

** values for single-mode fibres, all optical measurements performed at 1550 nm, * At room temperature 23°C \pm 2°C













Min. bending radius	mm	Without Tension 15 x Cable-Ø		Under Maximum Tension 25 x Cable-Ø	
Temperature range	°C	Installation -10 to +40	Transport. & Storage -40 to +70	Operation -40 to +60	

Optical Characteristics


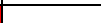






Various fibres possible.

Identification

Fibre Colours (standard)

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Red	White	Yellow	Blue	Green	Violet	Brown	Black	Orange	Turquoise	Pink	Grey
												

Tube Colouring(standard)

No.	1	2	3	4	5	6	7	8
Color	Red	White	Yellow	Blue	Green	Black	Brown	Violet
								

Yarn Colours (24 fibres/tube, two bundles of 12)

No.	1	2
Colour	Red	White
		

Sheath Colour:

The colour is orange for graded index (multi mode), fibres and yellow for single mode fibres.

Sheath Marking:

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

DRAKA JETNET [year] [fibre count] x [fibre type] [length marking]

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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