

Outdoor all dielectric optical cable, reinforced Aerial installation short span

Cable Design



- not to scale -

- **Micro-module:** Thin wall tubing, filled with a suitable compound, housing the single-mode optical fibres.
- **Water tightness:** dry core with swellable elements.
- **Reinforcement:** aramide yarns.
- **Strength members:** glass fibre reinforced plastic material.
- **Outer Sheath:** HDPE. Ripcord(s) underneath the sheath.

Installation overhead over short span, in duct or on front wall. Typical span 50-70 m⁽¹⁾.

Reinforced sheath. The Flextube® design provides easier storage & faster installation. Finger access to the fibres: no specific tools to open the Flextube.

⁽¹⁾Maximum spans may depend on the environmental conditions and on the predicted sags; see examples below. Specific cases may be evaluated with the technical parameters here below.

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

Technical data

No. of Fibres		12	24	36	48	72	96	144	288
Design	mm	1 x 12	2 x 12	3 x 12	4 x 12	6 x 12	8 x 12	12 x 12	24 x 12
Module diameter	mm	1.3							
Cable Diameter	mm	10.1	10.5	11	12.4	12.8	13.4	14.2	15.5
Cable Weight	kg / km	75	80	90	120	130	140	150	185
Thermal expansion coefficient	$\cdot 10^{-6} \text{ } ^\circ\text{C}^{-1}$	15.6	15.6	15.6	16.2	16.2	17.7	17.7	19.8
Effective area	mm ²	8.3	8.3	8.3	13.2	13.2	13.2	13.2	13.2
Modulus of elasticity	daN/mm ²	7000	7000	7000	6330	6330	6330	6330	6330
MIT (maximum tension at installation)	daN	64	64	64	92	92	92	92	92
MAT (maximum allowable tension)	daN	220	220	220	320	320	330	330	360
RTS (rated tensile strength)	kN	8.1	8.1	8.1	12	12	12	12	12
Min. Bending Radius	mm	Static 10 x Ø cable				Dynamic 20 x Ø cable			
Temperature Range	°C	Installation - 5 -> + 40		Transport & Storage - 40 -> + 70		Operation - 40 -> + 70			
Climatic conditions	Maximum span (m)	Installation Sag (%)							
Wind (100km/h) ; -5°C ; 5mm ice	50 / 70	1.2 / 3.2		1.2 / 1.7		1.2/1.9	1.2 / 2.0		

Optical Characteristics

See the attached cabled optical fibre data sheet.

Main characteristics

Test	Test Standard	Specified Value	Acceptance Criteria*
Max. Installation MAT	IEC 60794-1-2-E1	see table above	$\Delta l/l$ fibre $\leq 0.3\%$, $\Delta\alpha$ reversible
Crush	IEC 60794-1-2-E3	300 daN / 100 mm	$\Delta\alpha \leq 0.1$ dB
Impact	IEC 60794-1-2-E4	10 Nm	$\Delta\alpha$ reversible
Torsion	IEC 60794-1-2-E7	1 m, +/- 180°	$\Delta\alpha \leq 0.1$ dB
Temperature Cycling	IEC 60794-1-2-F1	-40°C to +70°C	$\Delta\alpha \leq 0.1$ dB/km
Water penetration	IEC 60794-1-2-F5B	sample=3m, water=1m	No water leakage after 24h

* values for single-mode fibres, measurement performed at 1550 nm.

Identification

Fibre Colours

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

Flextube Colours

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

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

Sheath Colour:

The outer sheath colour is black.

Sheath Marking:

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

**<Manufacturer> VODAFONE <Year/week of manufacture> <Cable type and no. of fibre>
<Length marking in meter>**

Logistic

Packing:

Wooden drums with protection.

Delivery Length:

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

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