

ADSS optical fibre cable

TC09381



- not to scale -

CABLE DESIGN

According to IEC/EN 60794-3-20

- Micromodule: thin wall flexible tubing, FlexTube®, filled with a suitable compound, housing the single-mode optical fibres. The fibres inside the tubes can be accessed without the need of any specific tool.
- Longitudinal Water Tightness: water swellable materials (dry core).
- Peripheral Strength Member: aramid yarns.
- Strength Members: glass fibre reinforced plastic material (GRP).
- Outer Sheath: UV resistant HDPE.

CABLE APPLICATION

These FlexTube® dielectric optical cables are designed for outdoor installation overhead over short span, in ducts or on front walls. Please contact your sales representative for ordering guides and installation information.

TECHNICAL DATA

No. of Fibres (grouped by 12)		4	12	24	48
Material Code	-	60114657	60114660	60114661	-
Configuration (Tubes x Fibres/Tube)	-	1x4	1x12	2x12	4x12
Tube Diameter - Ø	mm	1.3	1.3	1.3	1.3
Cable Diameter - Ø	mm	6	6	8	10
Cable Weight	kg / km	30	30	45	70
CTE ⁽²⁾	1E-6/°C	14.5	14.5	13.9	12.6
Effective Area	mm ²	3.2	3.2	4.1	6.9
Modulus of Elasticity	daN/mm ²	6420	6420	7260	7570
MIT / TL ⁽²⁾	daN	18	18	32	46
MAT ⁽²⁾	daN	80	80	120	120
RTS ⁽²⁾	kN	2.8	2.8	4.1	7.3
Minimum Bending Radius	mm	Under Maximum Tension: 20 x Cable Ø		Without Tension: 15 x Cable Ø	
Temperature Range	°C	Transport & Storage: -30 → +70		Installation: -20 → +60	Operation: -25 → +70

(1) other configurations upon specific request.

(2) aerial parameters. CTE: thermal elongation coefficient, MIT / TL: maximum tension at installation or long term, MAT: maximum allowable tension, RTS: no optical consideration, non-reversible damages.

INSTALLATION CONDITIONS

Climatic Conditions	Sag (%)	Maximum Span (m) ⁽³⁾
NESC Medium	1.0	50

(3) examples of computed values.

OPTICAL CHARACTERISTICS

See the attached cabled optical fibre data sheet.

MAIN CHARACTERISTICS

Test	Standard	Specified Value	Acceptance Criteria ⁽⁴⁾
Tensile Performance (MAT)	IEC 60794-1-21-E1	see above table, 5 min	$\Delta l/l$ fibre $\leq 0.3\%$, $\Delta\alpha \leq 0.5$ dB/km reversible
Crush	IEC 60794-1-21-E3A	1500 N / 100 mm, 10 min	$\Delta\alpha \leq 0.1$ dB reversible, no damage
Impact	IEC 60794-1-21-E4	10 J, 3 impacts, R = 300 mm	$\Delta\alpha$ reversible, no damage
Repeated Bending	IEC 60794-1-21-E6	R = 20 x OD, 50 cycles	$\Delta\alpha \leq 0.05$ dB reversible
Bend	IEC 60794-1-21-E11	R = 10 x OD, 4 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB reversible
Temperature Cycling	IEC 60794-1-22-F1	TA1: -25 °C, TB1: +70 °C	$\Delta\alpha \leq 0.1$ dB/km reversible
Water Penetration	IEC 60794-1-22-F5	3 m sample, 1 m water, 24 h	no water penetration
Sheath Marking Abrasion	IEC 60794-1-22-E2B Method 1	wet wool felt, 4N, 30 cycles	after the test the marking shall be legible
Drip Test	IEC 60794-1-22-E14	75 °C, 300 mm	no drip
Sheath Abrasion	IEC 60794-1-22-E2A	0.75 m sample, 55 \pm 5 cycles/min, 300 cycles, 4 N load, 4 abrasions, 100 mm distance between successive abrasions with 90° rotation	no penetration of sheath

(4) values for single-mode fibres, all optical measurements performed at 1550nm in accordance with ITU-T G650 recommendation.

IDENTIFICATION

Fibre Colours

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

Tube Colours for 4F and 12F

No.	1
Colour	natural

Tube Colours for 24F and 48F

No.	1	2	3	4
Colour	blue	orange	green	brown

Sheath Colour

The outer sheath colour is black.

Sheath Marking ⁽⁵⁾

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

PRYSMIAN SA OPTICAL CABLE TOL<no. of tubes>D <no. of fibres>(<no. of fibres/tube>SMR)T/E ΔEH <third party certification initials> Fca <month>/<year> <length marking> M

(5) customized marking available upon agreement.

LOGISTICS

Packing	Wooden drums with protection.
Standard Delivery Length ⁽⁶⁾	4000 m with a tolerance of - 1% / + 3%.

(6) other delivery lengths available upon agreement.

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