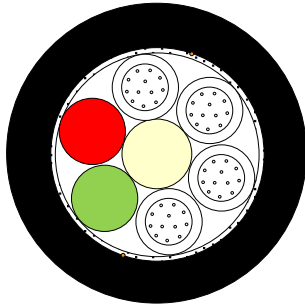


Duct optical fibre cable

TV06083



-not to scale-

Cable Design

According to IEC/EN 60794

- **Optical Fibres:** 250µm single-mode G.657.A1.
- **Central Strength Member (CSM):** glass fibres reinforced plastic rod (GRP) with or without over-sheath.
- **Tubes:** thermoplastic material containing 12 optical fibres and filled with a suitable water tightness compound.
- **Stranding:** loose tubes, SZ stranded around the CSM.
- **Longitudinal Water Tightness:** water swellable materials (dry core).
- **Outer Sheath:** UV resistant HDPE, 2 ripcords beneath.

Cable Application

These outdoor duct optical fibre cables are optimized for blowing, jetting or pulling into ducts. Please refer to our General Installation, Safety & Handling recommendations before handling.

Technical Data

No. of Fibres		12	24	48	72	96	144
Design	Ref	60093321	60093322	60093323	60093564	60093565	60093566
Layout (Tubes x Fibres)	-	1 x 12 (5 fillers)	2 x 12 (4 fillers)	4 x 12 (2 fillers)	6 x 12	8 x 12	12 x 12
Tube Diameter – Ø	mm	1.9					
CSM/Enlargement – Ø	mm	2.0				3.3	3.5 / 6.0
Sheath Thickness	mm	1.3					
Cable Diameter – Ø	mm	8.6				9.9	12.5
Cable Weight	kg / km	58				87	130
MIT (Maximum Installation Tension)	N	900				1350	1950
Minimum Bending Radius	mm	Under Maximum Tension: 20 x Cable Ø			Without Tension: 50 x CSM Ø		
Temperature Range	°C	Transport & Storage: -40 → +70		Installation: -20 → +45		Operation: -20 → +60	

Main Characteristics

Test	Standard	Specified Value	Acceptance Criteria
Tensile Performance	IEC 60794-1-21-E1	1.5 x W, see table above	$\Delta\alpha \leq 0.05$ dB, $\Delta/I \leq 0.60\%$
Crush	IEC 60794-1-21-E3	1500 N / 100 mm, 10 min	$\Delta\alpha \leq 0.05$ dB
Impact	IEC 60794-1-21-E4	10 J, 3 impacts, R = 300 mm	$\Delta\alpha \leq 0.05$ dB
Repeated Bending	IEC 60794-1-21-E6	R = 50 x CSM Ø, 25 cycles	Cable integrity
Torsion	IEC 60794-1-21-E7	$\pm 180^\circ$, 2 m	$\Delta\alpha \leq 0.05$ dB
Kink	IEC 60794-1-21-E10	R = 50 x CSM Ø	Cable integrity
Bend	IEC 60794-1-21-E11	R = 50 x CSM Ø, 4 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB
Temperature Cycling	IEC 60794-1-22-F1	-20 °C to +60 °C -30 °C to +70 °C	$\Delta\alpha \leq 0.05$ dB/km $\Delta\alpha \leq 0.15$ dB/km
Water Penetration	IEC 60794-1-22-F5B	3 m sample, 1 m water, 24 h	no water penetration
Ageing	IEC 60794-1-22-F9	168 hours, +85 °C	$\Delta\alpha \leq 0.25$ dB/km, 0.10 dB/km average

Optical Characteristics

See the attached optical fibre data sheet ref: 250µm single-mode G.657.A1 (CH).

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Identification

Fibre Colours:

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

Tube Colours:

No.	Pilot	Intermediate	Marker
Colour	red	natural	green

When fillers are required, red and green tubes become red and green fillers, respectively. If more fillers are required, natural tubes become yellow fillers.

Sheath Colour:

The outer sheath colour is black.

Sheath Marking:

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

<length marking in meters>M  <no. of fibres>F G657A1 PRYSMIAN PGH <year of manufacture>

Logistic

Packing:	Wooden drums with protection.
Delivery Lengths:	Standard delivery length is 2 km.
	Maximum delivery length is 6 km.

All optical measurements in accordance with ITU-T G650 recommendations

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