

OVAL G-DROP OUTDOOR OPTICAL CABLE

Cable Design

IEC/EN 60794



-12F version illustrated not to scale -

- **Tube:** thermoplastic material containing optical fibers and filled with a suitable water tightness compound.
- **Peripheral Strength Member:** 2 FRP beside of tube.
- **Longitudinal Water Tightness:** W/S yarns
- **Outer Sheath:** HDPE (minim 0.941 g/cm³) with minimum carbon black content 2.0 % and good aging characteristics, 2 ripcords beneath.

In case of aerial installation between poles, the maximum permitted span is 50 meter with 1% installation sag. The cables withstand the maximum additional loads generated by wind and ice in the following environment:

- (a) temperature -5°C, wind speed 100 km/h
- (b) temperature -20°C, wind speed 50 km/h, ice radial thickness 8 mm

The use of proper fittings is recommended, in order to achieve the mentioned performance.

Technical data

No. of Fibers		Up to 12		
Tube diameter - Ø	mm	2.8		
Minimum sheath thickness	mm	0.6		
Cable dimensions	mm	4.8 x 8.3		
Cable weight	Kg/Km	45		
Min. bending radius	mm	Under Tension: 20xCable-Ø		Without Tension: 15xCable-Ø
Temperature range	°C	Transport & Storage: -40 -> +70	Installation: -10 -> +50	Operation: -40 -> +70

Main characteristics

Test	Standard	Value	Requirement*
Tensile Strength (static)	IEC 60794-1-2-E1	400N, 5 min.	$\Delta I/I$ fiber $\leq 0.05\%$, $\Delta\alpha \leq 0.05$ dB under test, reversible
Tensile Strength (dynamic)	IEC 60794-1-2-E1	1000N, 5 min.	$\Delta I/I$ fiber $\leq 0.33\%$, $\Delta\alpha$ reversible
Crush	IEC 60794-1-2-E3	1000 N/100mm, max. 5 min	$\Delta\alpha \leq 0.05$ dB, reversible, no damage
Impact	IEC 60794-1-2-E4	5 J, 3 impacts, R=300 mm	$\Delta\alpha \leq 0.05$ dB after test, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20xOD, 100N, 100 cycles	No break of fibers or cable's elements
Torsion	IEC 60794-1-2-E7	$\pm 90^\circ$, 2 m, 400N, 5 cycles	$\Delta\alpha \leq 0.05$ dB after test, no damage
Bend	IEC 60794-1-2-E11A	D=15xOD, 5 cycles	$\Delta\alpha \leq 0.05$ dB after test, no damage
Temperature Cycling	IEC 60794-1-2-F1	-40 -> +70 °C, 2 cycles	$\Delta\alpha \leq 0.05$ dB/Km, reversible
Water Penetration	IEC 60794-1-2-F5B	3 m sample, 1 m water column	No water penetration in 24 h













*values for single-mode fibers, all optical measurements performed at @1550nm

Optical Characteristics

See the attached cabled optical fiber data sheet.

Identification

Fiber Colors:

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

Sheath Color:

The outer sheath color is black.

Sheath Marking:

The outer sheath is marked in 1 meter intervals by hot print foil method as follows:

PRYSMIAN (S) wwyy FLAT DROP nn FO SM LOH OPTICAL CABLE zzzz

Where: wwyy = week & year; nn = number of fibres, zzzz = meter marking
Other text can be printed on the outer sheath, according to customer request.

Logistic

Packing:

Wooden drums with protection.

Delivery Lengths: 4000 ± 200 m.

Other lengths available upon agreement, up to a maximum of 10% of the total number of cable lengths could be shorter than nominal values.

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