INDOOR OPTICAL CABLE

Cable Design

IEC/EN 60794-2-50

-2F version illustrated not to scale -

- **Fibers**: G.657A1 or G.657A2
- **Buffers:** 0.9 mm easy stripping buffers (ESFU).
- **Peripheral Strength Member:** aramid yarns.
- **Outer Sheath:** Flame retardant LSOH.

This dielectric optical cable is designed for indoor installation technique.

Technical data

No. of Fibres		**1**	**2**	**4**
Buffer diameter - ø	mm	0.900		
Sheath thickness	mm	0.70		
Cable diameter – ø	mm	$3.8^{\pm 0.1}$		$4.4^{\pm 0.2}$
Cable weight, max.	Kg/Km	15		20
Min. bending radius	mm	Under Tension: 15xCable-ø		Without Tension: 10xCable-ø
Temperature range	°C	Transport : -10 -> +60	Installation: -10 -> +40	Operation: -10 -> +60

Main characteristics

Test	**Standard**	**Value**	**Requirement***
Tensile Strength (static)	IEC 60794-1-2-E1	90 N, 5 min.	$\Delta l/l$ fibre ≤ 0.20%, $\Delta\alpha$ ≤ 0.05 dB under test, reversible
Tensile Strength (dynamic)	IEC 60794-1-2-E1	270N, 5 min.	$\Delta l/l$ fibre ≤ 0.60%, $\Delta\alpha$ ≤ 0.10 dB under test, reversible
Crush	IEC 60794-1-2-E3	150 N/100mm, max. 15 min	$\Delta\alpha$ ≤ 0.10 dB under test, reversible, no damage
Impact	IEC 60794-1-2-E4	5 J, 3 impacts, R=300 mm	$\Delta\alpha$ ≤ 0.10 dB after test, no damage
Repeated Bending	IEC 60794-1-2-E6	R=15xOD, 50N, 100 cycles	No break of fibres or tensile performance elements
Torsion	IEC 60794-1-2-E7	± 180°, 1 m, 20N, 20 cycles	$\Delta\alpha$ ≤ 0.10 dB under test, reversible, no damage
Bend (at low temperature)	IEC 60794-1-2-E11A	Test diameter=10xOD, 5 cycles	$\Delta\alpha$ ≤ 0.05 dB under test, reversible, no damage
Temperature Cycling	IEC 60794-1-2-F1	-10 -> +60 °C, 2 cycles, time of cycle = 18h	$\Delta\alpha$ ≤ 0.05 dB/Km, reversible
Kink	IEC 60794-1-2-E10	Test temperature: 23 °C±3 °C, Test diameter=5xOD	No kink after test
Abrasion Resistance of Cable Marking	IEC 60794-1-2-E2B-1	3 cycles, load = 450 g	After the test the marking shall be legible
Flame Propagation	IEC 60332-1	-	As in IEC 60332-1
Halogen content	IEC 60754-1	-	Halogen content <0.5%
Corrosivity of Smoke Gases	IEC 60754-1	-	pH value ≥ 4.3
Conductivity of Smoke Gases	IEC 60754-1	-	Conductivity > 10 µS/mm

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

Optical Characteristics

See the attached cabled optical fibre G.657A1 or G.657A2 data sheet.

Identification

Fibre & buffers Colors

No.	1	2	3	4
Colour	red	blue	green	yellow

Sheath Color:
The outer sheath color is white.

Sheath Marking:
The outer sheath is marked in 1 meter intervals by ink jet method as follows:

wwyy PRYSMIAN (S) VERTICASA DROP CABLE nFO ft K1M LSOH zzzz

where: wwyy = manufacturing year; n = number of optical fibre; ft = fibre type; zzzz = sequential length mark

Logistics

Packing:
Wooden drums with protection.

Delivery Lengths: 2100 ± 100 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