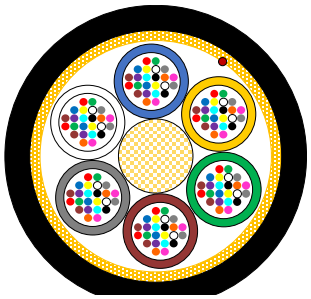
Sirocco Miniduct Optical Cable

Cable Design

IEC/EN 60794



- 144FO version illustrated, not to scale -

- **Central Strength Member (CSM):** glass fibres reinforced plastic material (GRP).
- **Loose Tubes:** thermoplastic material containing optical fibres and filled with a suitable water tightness compound.
- **Filler Elements:** thermoplastic rods, where needed
- **Stranding:** loose tubes, SZ stranded around the CSM.
- **Longitudinal Water Tightness:** water swellable materials (dry core).
- **Outer Sheath:** HDPE.

This dielectric optical cable is designed for microduct installation using blowing technology.

Technical data

No. of Fibres		**144**	**216**
Design	-	6x24	9x24
Number of fillers	-	-	
Tube diameter - ø	mm	1.65	
CSM / Enlargement - ø	mm	1.8/-	2.5/3.3
Sheath thickness	mm	0.4	0.6
Cable diameter - ø	mm	6.0	8.0
Cable weight	Kg/Km	32	59

Min. bending radius	mm	Under Maximum Tension: 20xCable-ø	Without Tension: 15xCable-ø	
Temperature range	°C	Transport & Storage: -40 -> +70	Installation: -15 -> +50	Operation: -30 -> +70

Main characteristics

Test	**Standard**	**Value**	**Requirement***
Installation Tensile	IEC 60794-1-21-E1	1500N	$\Delta l/l$ fibre ≤ 0.6%, $\Delta\alpha$ reversible
Operation Tensile	IEC 60794-1-21-E1	500N	$\Delta l/l$ fibre ≤ 0.2%, $\Delta\alpha \leq 0.05$ dB
Cable Bend	IEC 60794-1-21-E11	R=20xOD, 5 cycles, 5 turns	$\Delta\alpha \leq 0.05$ dB after the test, no damage
Repeated Bending	IEC 60794-1-21-E6	R=20xOD, 100N, 35 cycles	$\Delta\alpha \leq 0.05$ dB after the test, no damage
Kink	IEC 60794-1-21-E10	10xOD	No kink
Crush - Short Term	IEC 60794-1-21-E3	1000N/100mm, max. 1min	$\Delta\alpha \leq 0.05$ dB under test, no damage
Crush - Long Term	IEC 60794-1-21-E3	700N/100mm, max. 15min	$\Delta\alpha \leq 0.10$ dB under test, no damage
Impact	IEC 60794-1-21-E4	1J, 1 impacts, R=300 mm	$\Delta\alpha \leq 0.05$ dB after the test, no damage
Cable Torsion	IEC 60794-1-22-E7	±180°, 2 m, 5 cycles	$\Delta\alpha \leq 0.05$ dB after the test, no damage
Temperature Cycling	IEC 60794-1-22-F1	-30 -> +70 °C, 2 cycles,	$\Delta\alpha \leq 0.10$ dB/Km, reversible
Water Penetration	IEC 60794-1-22-F5B	3m sample, 24 h	No water penetration

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

Optical Characteristics

See the attached 200µm cabled optical fibre data sheet.

Identification

Fibre Colors:

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	blue	orange	green	brown	slate	white	red	black	yellow	violet	rose	aqua
No.	13	14	15	16	17	18	19	20	21	22	23	24
Color	blue#	orange#	green#	brown#	slate#	white#	red#	natural#	yellow#	violet#	rose#	aqua#

Fiber Colors: blue, orange, green, brown, white, slate, red, black, yellow, violet, rose, aqua, blue#, orange#, green#, brown#, white#, slate#, red#, natural#, yellow#, violet#, rose#, aqua#.

#=one black ring.

Tube Colors:

Fiber Count	**Elements**								
No. of tubes x no. of fibres per tube	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
6 x 24	BL24T	OR24T	GR24T	BN24T	SL24T	WH24T	-	-	-
9 x 24	BL24T	OR24T	GR24T	BN24T	SL24T	WH24T	RD24T	BK24T	YE24T

where: BL24T = Blue tube with 24 fibers, OR24T = Orange tube with 24 fibers, GR24T = Green tube with 24 fibers, BN24T = Brown tube with 24 fibers, WH24T = White tube with 24 fibers, SL24T = Slate tube with 24 fibers, RD24T = Red tube with 24 fibers, BK24T = Black tube with 24 fibers, YE24T = Yellow tube with 24 fibers.

Sheath Color:
The outer sheath color is black.

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

where: yyyy= year of manufacture, n = Number of tubes, zzzz = Sequential Length Mark

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.