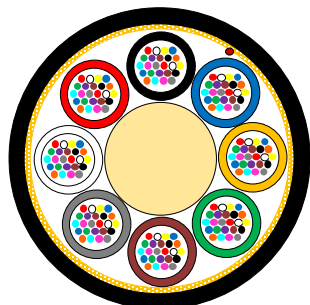


Sirocco^{HD} Miniduct Optical Cable

Cable Design

IEC/EN 60794



- 192F version illustrated not to scale -

- **Central Strength Member (CSM):** glass fibers reinforced plastic rod (GRP)
- **Tubes:** thermoplastic material containing 24 optical fibers and filled with a suitable water tightness compound.
- **Stranding:** loose tubes (and fillers), SZ stranded around the CSM.
- **Longitudinal Water Tightness:** water swellable elements (dry core)
- **Outer Sheath:** HDPE, UV resistant, 1 red ripcord beneath.

This dielectric optical cable is designed for blowing installation technique.

Technical data

No. of Fibers	-	192	288
Design	-	8 x 24	12 x 24
Tube diameter - \varnothing	mm		1.3
CSM / Enlargement - \varnothing	mm	2.4 / -	2.4 / 3.9
Sheath thickness	mm		0.4
Cable diameter - \varnothing	mm	5.8 ^{±0.2}	7.4 ^{±0.2}
Cable weight	Kg/Km	35	51
Min. bending radius	mm	Under Maximum Tension: 20xCable- \varnothing	Without Tension: 15xCable- \varnothing
Temperature range	°C	Transport: -40 -> +70	Installation: -5 -> +40 Operation: -30 -> +60

Main characteristics

Test	Standard	Value	Requirement*
Max. Installation Tension	IEC 60794-1-21-E1	1000 N	$\Delta l/l$ fibre \leq 0.6%, $\Delta\alpha$ reversible
Crush	IEC 60794-1-21-E3	1000 N / 100 mm, max. 5 min	$\Delta\alpha \leq$ 0.1 dB, no damage
Impact	IEC 60794-1-21-E4	2 J, 3 impacts, R=300 mm	$\Delta\alpha \leq$ 0.1 dB after test
Repeated Bending	IEC 60794-1-21-E6	R=20xOD, 100N, 25 cycles	$\Delta\alpha \leq$ 0.1 dB no damage
Torsion	IEC 60794-1-21-E7	+/-180°, 2m, 100N	$\Delta\alpha \leq$ 0.1 dB no damage
Cable Bend	IEC 60794-1-21-E11	R=20xOD, 5 turns, 3 cycles	$\Delta\alpha \leq$ 0.05 dB after test
Temperature Cycling	IEC 60794-1-22-F1	-30°C to +60°C	$\Delta\alpha \leq$ 0.1dB/km
Water Penetration	IEC 60794-1-22-F5B	3m sample, 1m water column, 24h	No water penetration

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

Optical Characteristics

See the attached cabled optical fiber BBXS **G.657A2 200 μ m** data sheet.

Identification

Fiber 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	white	yellow	violet	rose	aqua

where: | = one ring; || = two rings

Tube Colors:

Fibre Count	Element											
	1	2	3	4	5	6	7	8	9	10	11	12
192	BL24T	OR24T	GR24T	BN24T	ST24T	WH24T	RD24T	BK24T				
288	BL24T	OR24T	GR24T	BN24T	ST24T	WH24T	RD24T	BK24T	YE24T	VI24T	RS24T	AQ24T

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; ST24T = slate tube with 24 fibers; WH24T = white tube with 24 fibers; RD24T = red tube with 24 fibers; BK24T = black tube with 24 fibers; YE24T = yellow tube with 24 fibers; VI24T = violet tube with 24 fibers; RS24T = rose tube with 24 fibers; AQ24T = aqua tube with 24 fibers.

Sheath Color:

The outer sheath color is black.

Sheath Marking:

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



where: yyyy = year of production, nn = total number of fibers, mmmm = sequential length mark

Logistic

Packing:

Wooden drums with protection.

Delivery Lengths: 2000 ± 100 m, 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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