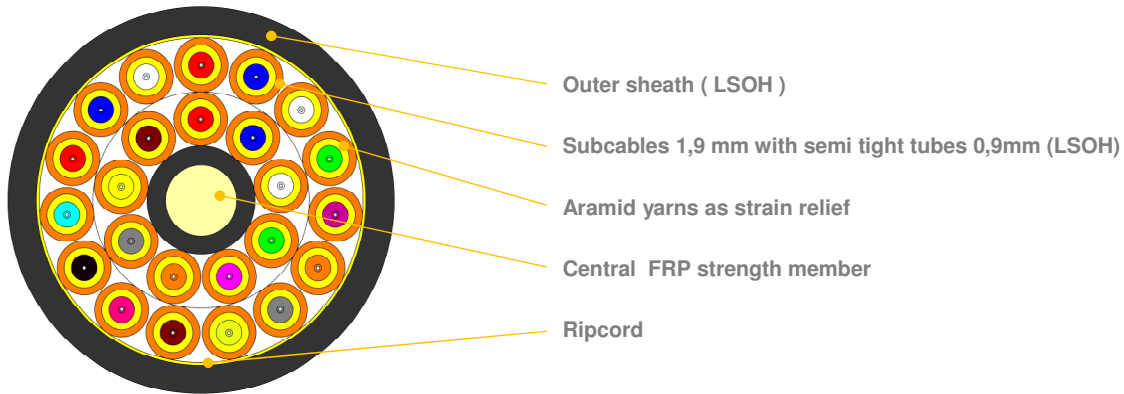


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Indoor / Outdoor Breakout Cable with 24 fibers with Subcables LBR2-19



*Schematic drawing, not to scale

APPLICATION:

Cable for indoor installation
For distribution networks in multifamily buildings
For use in places with fire exposed
FTTD Connections

STRUCTURE AND COMPOSITION:

Tight buffers 900µm with 24 pcs in cable
Fully dielectric cable,
Aramid yarns as strain relief
Black LSOH outer jacket (increased UV resistance)

CABLE DESIGN:

Variant	Subcables	Ø nominal (±5%)	Nominal weight (±10%)	Max short term tensile load	Max long term tensile load
	[pcs]	[mm]	[kg/km]	[N]	[N]
24F	24	13,4	183	2000	500

MAIN MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Test	Test method	Test parameters	Requirements*
Tensile strength	IEC 60794-1-21-E1	Max load: as provided in table above	Fiber strain: < 0.3%(during test) ≤ 0.05%(after test) Δα≤0,2 dB/km (during test) Δα reversible (after test)
		Operating Load: as provided in table above	< 0.05% (during test) Δα≤0,2 dB/km (during test) Δα reversible (after test)
Crush performance	IEC 60794-1-21-E3	2000 N / 100 mm	Δα ≤ 0.1 dB
		2500 N / 100 mm	Reversibility
Static bend	IEC 60794-1-21-E11A	20 x D installation 10 x D static	Δα ≤ 0.1 dB, no damage
Kink	IEC 60794-1-21-E10	5xD reversible	no straw effect
Torsion	IEC 60794-1-21-E7	120N, ± 180°, 10 cycles	Δα ≤ 0.1 dB/km, no damage
Temperature: Installation	IEC 60794-1-22-F1	-5... +55 [°C]	Δα ≤ 0.1 dB/km, reversible
Operation		-40... +70 [°C]	
Transport & Storage		-40... +70 [°C]	

(*) All values for single-mode optical fibres, all optical parameters for wavelength 1550nm

MAIN MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS FOR SUBCABLES

Test	Test method	Test parameters	Requirements*
Crush performance	IEC 60794-1-21-E3	1000 N / 100 mm	Δα ≤ 0.05 dB, no damage
Static bend	IEC 60794-1-21-E11A	Radius 30mm for G652D Radius 15mm for G657A2	Δα ≤ 0.1 dB, no damage
Repeated bending	IEC 60794-1-21-E6	Radius 30mm Load: 5N for G652D Radius 15mm Load: 5N for G657A2	Δα ≤ 0.1 dB, no damage
Water penetration	IEC 60794-1-22-F5B	sample=3m, water column=1m, 24h	no water leakage
Kink	IEC 60794-1-21-E10	10mm	no damage

(*) All values for single-mode optical fibres, all optical parameters for wavelength 1550nm

OPTICAL FIBRES AND LOOSE TUBES COLOUR IDENTIFICATION

Fibres and tubes identification information see **DSH_Colors_CODE_XXXX** document.

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FIBRES PARAMETERS

Optical fibres parameters see **DSH_OFFP** document.

MARKING

The following printing (using jet printer) is applied at 1-meter intervals.

- Supplier: FIBRAIN
- Standard Code (Product Type, Fiber Type, Fiber Count)
- Year of manufacture: xxxx
- Length marking in meters
- Cable ID/ Drum No

Example: FIBRAIN LBR2-19 24F SM G657A1 "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is $\pm 0,5\%$. Remarking is in accordance with Bellcore GR 20 and supersedes earlier markings. Occasional loss of marking is possible. Cables can be supplied with a range of single mode or multimode fibres and customized print.

PACKING

Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Rotation direction arrow will be marked on the drum together with identification information.

DELIVERY LENGTH

2000 – 8000 meters $\pm 5\%$, with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.