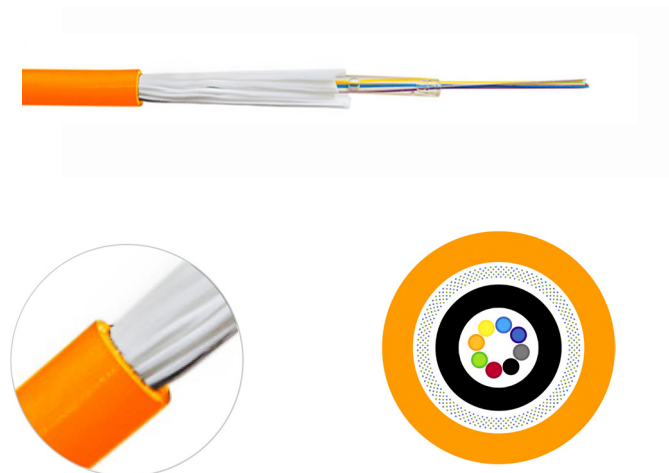
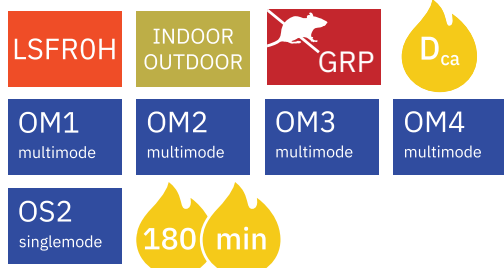


Fire-resistant universal CLT cable, 180 min. at 750°C, Euroclass D_{ca}

P/N: CLTFRxyyy



Features

- fire-resistant (180 min. at 750°C) according to the standard IEC 60331-25
- fully dielectric construction, halogen-free and fire retardant sheath
- tensile elements made of water blocking glass yarns
- primary protection of 250 µm
- central loose tube filled with water blocking gel
- suitable for outdoor as well as for indoor environment
- resistant to moisture, water and UV radiation
- partial rodent protection (glass rodent protection - GRP)
- ideal for horizontal campus duct installations using blowing and pulling technique

4 fibers

OM1 P/N: CLTFR04OM1

OM1 multimode 62,5/125 µm

OM2 P/N: CLTFR04OM2

OM2 multimode 50/125 µm

OM3 P/N: CLTFR04OM3

OM3 multimode 50/125 µm

OM4 P/N: CLTFR04OM4

OM4 multimode 50/125 µm

OS2 P/N: CLTFR04OS2

OS2 singlemode 9/125 µm
(ITU-T G.652.D and G.657.A1)

8 fibers

OM1 P/N: CLTFR08OM1

OM1 multimode 62,5/125 µm

OM2 P/N: CLTFR08OM2

OM2 multimode 50/125 µm

OM3 P/N: CLTFR08OM3

OM3 multimode 50/125 µm

OM4 P/N: CLTFR08OM4

OM4 multimode 50/125 µm

OS2 P/N: CLTFR08OS2

OS2 singlemode 9/125 µm
(ITU-T G.652.D and G.657.A1)

12 fibers

OM1 P/N: CLTFR12OM1

OM1 multimode 62,5/125 µm

OM2 P/N: CLTFR12OM2

OM2 multimode 50/125 µm

OM3 P/N: CLTFR12OM3

OM3 multimode 50/125 µm

OM4 P/N: CLTFR12OM4

OM4 multimode 50/125 µm

OS2 P/N: CLTFR12OS2

OS2 singlemode 9/125 µm
(ITU-T G.652.D and G.657.A1)

24 fibers

OM1 P/N: CLTFR24OM1

OM1 multimode 62,5/125 µm

OM2 P/N: CLTFR24OM2

OM2 multimode 50/125 µm

OM3 P/N: CLTFR24OM3

OM3 multimode 50/125 µm

OM4 P/N: CLTFR24OM4

OM4 multimode 50/125 µm

OS2 P/N: CLTFR24OS2

OS2 singlemode 9/125 µm
(ITU-T G.652.D and G.657.A1)

Fire reaction and fire safety

Reaction to fire	4-12 fibers	D _{ca} – s1, d1, a1	EN 50575, EN 13501-6
	24 fibers	D _{ca} – s2, d1, a1	EN 50575, EN 13501-6
Fire safety		flame retardancy	EN 60332-3-22
		smoke performance	EN 61034-1, EN 61034-2
		halogen acidity	EN 60754-2
Fire resistance			IEC 60331-25 (180 min. / 750 °C)

Mechanical properties

Number of fibers		4	8	12	24
Loose tube diameter		7 mm	7 mm	7 mm	7 mm
Sheath		1,3 mm	1,3 mm	1,3 mm	1,3 mm
Nominal cable diameter		2,3 mm	2,3 mm	2,3 mm	2,3 mm
Cable weight netto		58 kg/km	58 kg/km	58 kg/km	68 kg/km
Min. bending radius	installation	140 mm	140 mm	140 mm	156 mm
	operation	70 mm	70 mm	70 mm	78 mm
Max. tensile strength	installation	2 000 N	2 000 N	2 000 N	2 000 N
	operation	300 N	300 N	300 N	300 N
Crush resistance		10 Nm	10 Nm	10 Nm	10 Nm
Temperature range	installation	-5°C to 50°C			
	operation	-30°C to 70°C			

Fiber properties MM

Cabled optical fibre (ISO/IEC 11801)	OM1	OM2	OM3	OM4
IEC 60793-2	10-A1b	10-A1a.1	10-A1a.2	10-A1a.3
ITU-T	—	G.651.1	—	—
Attenuation @ 850 / 1300 (dB/km)	≤ 3,2 / ≤ 0,8	≤ 2,7 / ≤ 0,8	≤ 3 / ≤ 1	≤ 2,4 / ≤ 0,6
Bandwidth @ 850 / 1300 (MHz.km)	≥ 200 / ≥ 500	≥ 500 / ≥ 500	≥ 1500 / ≥ 500	≥ 3500 / ≥ 500
Numerical aperture	0,275 ± 0,015	0,200 ± 0,015	0,200 ± 0,015	0,200 ± 0,015
Refractive index @ 850 / 1300 nm	1,495 / 1,490	1,482 / 1,477	1,482 / 1,477	1,482 / 1,477
Core diameter (µm)	62,5 ± 2	50 ± 2	50 ± 2	50 ± 2
Overall cladding diameter (µm)	125 ± 1,0	125 ± 1,0	125 ± 1,0	125 ± 1,0

Fiber properties SM

Cabled optical fibre (ISO/IEC 11801)	OS2
IEC 60793-2	50-B1.3
ITU-T	G.652.D and G.657.A1
Attenuation @ 1310 / 1550 nm (dB/km)	$\leq 0,33$ / $\leq 0,20$
Refractive index @ 1310 / 1550 nm	1,467 / 1,468
MFD (μm)	$9,2 \pm 0,4$
Overall cladding diameter (μm)	$125 \pm 0,7$



The determination of Reaction to Fire Class Performance of this cable has been performed by Product Certification Body notified by European Commission, which also carries out the assessment and verification of constant performance (AVCP) in the System 3.