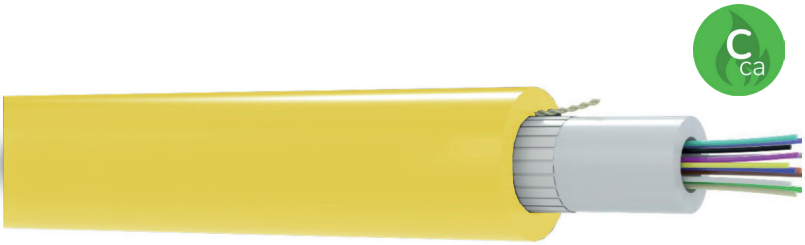
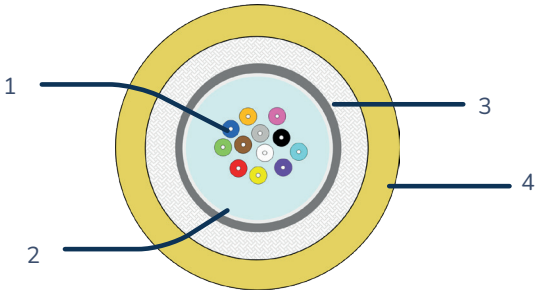
KFOxxxxCTZHC

Central Tube Indoor/Outdoor LSZH Fiber Optic Cable

Unikkern





1. 250-micron optical fiber
2. PBT tube filled with sealing gel
3. Fiberglass protection
4. UV-resistant LSZH sheath

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- Compliant with ISO 11801 and IEC 60794 standards
- Excellent water resistance and UV protection
- LSZH sheath with CPR Cca EN50575 classification

THE PURPOSE

Our fiber optic cable offers a high-performance solution for data transmission, providing enhanced protection against rodents, water ingress, and UV radiation. This cable accommodates up to 24 optical fibers, each safe-guarded within a color-coded PBT tube for easy identification. The central dielectric tube is filled with a thixotropic water-blocking gel, ensuring optimal moisture protection.

To reinforce the structure, fiberglass yarns are incorporated, and a dry swelling material fills the interstices to prevent water penetration. The assembly is completed with a UV-resistant LSZH outer sheath, ensuring long-term durability and suitability for both indoor and protected outdoor use.

COMPLIANCE

Cable standard	System	Applications
IEC 601793 B1.3 Singlemode	ISO/IEC 11801-1:2017 OS2, OM3	From 1G to 400G
IEC 601793-2 A1 Multimode	or OM4	

THE STRUCTURE

Optical fiber : 9/125 OS2 / G652D
Tube : PBT filled with sealing gel, accommodating up to 24 optical fibers - 2-12FO : 2.9mm /16FO-24FO : 3.3mm.
Fiberglass protection : Water-blocking fiberglass yarn.
Assembly : Central core with swelling tape.
Sheath : UV-resistant colored LSZH
Marking : UNIKKERN OPTICAL FIBER xx FO ZZZ X/125 CENTRAL TUBE UNIVERSAL LSZH Cca Certified SGS 21WWYY xxxxxxM

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THE STRUCTURE

Identification according to the following code : IEC 304

Nbr	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

From 13 to 24, the colors are identical but with an additional black stripe.

PURCHASE INFO

Nb of Fiber	Nb of Tube	Perf	Item	Diameter (nom)	Weight (Kg)	Crush resistance(N/100mm)	Tensile strength (N)	Packing
6	1	OS2	KFO6OS2CTZHC	6.5mm	50	1000	800 long term 1200 short term	D4000M
8	1	OS2	KFO8OS2CTZHC	6.5mm	52	1000	800 long term 1200 short term	D4000M
12	1	OS2	KFO12OS2CTZHC	6.5.mm	54	1000	800 long term 1200 short term	D4000M
24	1	OS2	KFO24OS2CTZHC	7.0mm	64	1000	800 long term 1200 short term	D4000M
6	1	OM3	KFO6OM3CTZHC	6.5mm	50	1000	800 long term 1200 short term	D4000M
8	1	OM3	KFO8OM3CTZHC	6.5mm	52	1000	800 long term 1200 short term	D4000M
12	1	OM3	KFO12OM3CTZHC	6.5mm	54	1000	800 long term 1200 short term	D4000M
24	1	OM3	KFOCT24OM3CTZHC	7.0mm	64	1000	800 long term 1200 short term	D4000M
6	1	OM4	KFO6OM4CTZHC	6.5mm	50	1000	800 long term 1200 short term	D4000M
8	1	OM4	KFO8OM4CTZHC	6.5mm	52	1000	800 long term 1200 short term	D4000M
12	1	OM4	KFO12OM4CTZHC	6.5mm	54	1000	800 long term 1200 short term	D4000M
24	1	OM4	KFOCT24OM4CTZHC	7.0mm	64	1000	800 long term 1200 short term	D4000M

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TECHNICALITIES

OS2 Performances (G652D)

MODE FIELD DIAMETER @1310NM	9.2±0.4μM
MODE FIELD DIAMETER @1550NM	10.4±0.5μM
CLADDING DIAMETER	125.0± 1μM
CORE CONCENTRICITY ERROR	≤0.6μM
CLADDING NON-CONCIRCULARITY	≤ 1.0%
COATING DIAMETER	245±10μM (BEFORE COLORED)
	250±15μM (COLORED)
COATING/CLADDING CONCENTRICITY ERROR	≤12μM
CABLE CUTOFF WAVELENGTH	≤1260 nM
POINT DISCONTINUITY	≤0.05DB
ATTENUATION COEFFICIENT @ 1310 NM	≤0.36DB/KM
@ 1383 NM	≤0.36DB/KM
@ 1550 NM	≤0.22DB/KM
@ 1625NM	≤0.24DB/KM
MACRO-BEND INDUCED ATTENUATION	
100 TURNS, 30MM RADIUS @1550N/1625M	≤0.05DB
PMD	
MAX. INDIVIDUAL FIBER	≤0.2 PS/KM1/2
PMDQ	≤0.1 PS/KM1/2
ZERO-DISPERSION WAVELENGTH	1300 ~ 1324 NM
ZERO-DISPERSION SLOPE	≤ 0.092 PS/(NM^2.KM)
CHROMATIC DISPERSION COEFFICIENT	
@ 1288-1339 NM	≤3.5PS/(NM. KM)
@ 1271-1360NM	≤5.3PS/(NM. KM)
@ 1550 NM	≤18PS/(NM. KM)
@ 1625 NM	≤22PS/(NM. KM)
PROOF TEST LEVEL	100 KPSI (0.69 GPA), 1% STRAIN
COATING STRIP FORCE(PEAK VALUE)	1.3~8.9N
FIBER CURL (RADIUS)	^{3} 4 M

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TECHNICALITIES

MULTIMODE FIBERS common Performances

CORE DIAMETER	50 ± 2.5 µM
CORE NON-CIRCULARITY	≤ 5%
CORE-CLADDING CONCENTRICITY ERROR	≤ 1.5 µM
CLADDING DIAMETER	125 ± 1.0 µM
CLADDING NON-CIRCULARITY	≤ 1%
COATING DIAMETER	242 ± 7 µM
COATING NON-CIRCULARITY	≤ 5%
COATING-CLADDING CONCENTRICITY ERROR	≤ 10%
ATTENUATION COEFFICIENT AT 850 NM	≤ 2.4 DB/KM
ATTENUATION COEFFICIENT AT 1300 NM	≤ 0.6 DB/KM
MACROBENDING LOSS MANDREL RADIUS = 7.5 MM, 2 TURNS MANDREL RADIUS = 15 MM, 2 TURNS MANDREL RADIUS = 37.5 MM, 100 TURNS	 ≤ 0.2 / ≤ 0.5 DB ≤ 0.1 / ≤ 0.3 DB ≤ 0.5 / ≤ 0.5 DB
PEAK COATING STRIP FORCE, UNAGED AND AGED	1.3 ≤ FPEAK-STRIP ≤ 8.9 N

OM3 Specific performances

BANDWIDTH (OFL) OVERFILLED MODAL BANDWIDTH AT 850 NM OVERFILLED MODAL BANDWIDTH AT 1300 NM	 ≥ 1500 MHZ.KM ≥ 500 MHZ. KM
BANDWIDTH (EMB) EFFECTIVE MODAL BANDWIDTH AT 850 NM	 ≥ 2000 MHZ.KM

OM4 Specific performances

BANDWIDTH (OFL) OVERFILLED MODAL BANDWIDTH AT 850 NM OVERFILLED MODAL BANDWIDTH AT 1300 NM	 ≥ 3500 MHZ.KM ≥ 500 MHZ. KM
BANDWIDTH (EMB) EFFECTIVE MODAL BANDWIDTH AT 850 NM	 ≥ 4700 MHZ.KM

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