

FO Breakout cable 50/125μ OM2 LSOH 2,0mm



tde - Standard FO Cables

The standard fiber optic cable types of tde specifically for the assembling of patch and adapter cables, pigtails and trunk cables has been developed. Also the use in FTTH applications inside buildings is possible. The breakout cables have up to 24 individual elements with a 2mm diameter. The overall cable diameter is very slim.

These cables are characterized by very good termination properties. The cable jacket and the secondary coating are easy removable.

Features

- Robust, flexible fiber optic Duplex cable with a combined sheath based on 2 single fiber cables 2.8 mm with semi tight buffer 0.9mm.
- Easy handling and simple to strip off.
- Low Fire load due to the halogen free LSOH sheath.

Application

- Patch cable between terminal distributors and/or end devices
- Direct connector installation
- Can be spliced in cable terminal distributors.

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FO Breakout cable 50/125μ OM2 LSOH 2,0mm

Optical characteristics

The cables are available with different types of fiber

Technical Data

Mechanical characteristics

Temperature range	Operation: -20 to +60°C IEC 60794-2-10
	-10 to +60°C for assembled patch cords
Tensile performance	IEC 60794-1-21 E1 A
Crush resistance	IEC 60794-1-21 E3
Impact	IEC 60794-1-21 E4
Repeated bending	IEC 60794-1-21 E6
Torsion	IEC 60794-1-21 E7
Bend	IEC 60794-1-21 E11 A

General characteristics

Sheath colour	G50/125 OM2 orange, RAL 2003
Zero halogen, no corrosive gases	IEC 60754-1/-2, EN 60754-1/-2, VDE 0482-754-1/-2
Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2, SEV TP 20B/3C 3.4.1.1
Smoke density	IEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2
Reaction to fire (Euroclasses)	EN 13501-6: D _{ca} -s2,d1,a1

Optical Characteristics

Fibertype	MM-OM2, 50/125μ	
Numerical aperture	0.200 ± 0.015	
Core Ø	50 ± 2.5 μm	
Max. Core non-circularity	5 %	
Cladding Ø	125 ± 2 μm	
Max. Cladding non-circularity	1.0 %	
Max. Cladding/Core concentricity error	1.5 μm	
Max. Coating concentricity error	12 μm	
Coating Ø	242 ± 5 μm	
Proof test	100 kpsi	
Wavelength	850 nm	1300 nm
Attenuation typ. (cabled)	2.5 dB/km	0.5 dB/km
Attenuation max. (cabled)	2.7 dB/km	0.7 dB/km
OFL-Bandwidth per TIA/EIA 455-204 and IEC 60793-1-41	700 MHz x km	500 MHz x km
RML-Bandwidth per TIA/EIA 455-204 and IEC 60793-1-41	850 MHz x km	
Refractive index	1.480	1.479

Description	Duplex I-K(ZN)HH
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CableØ	4.8 x 3.2 mm
Weight	21 kg/km
Bending radius	50 mm
Tensile load	200 N
Crush resistance short term	3000 N/cm
Fire load	100 kWh/km
Fire load	360 MJ/km

FO Fiber

Type	Corning ClearCurve OM2 50/125µm multimode fiber
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ClearCurve® OM2

Optimized Data Rate	10 Gb/s over 150 m	
Over Distance	1 Gb/s over 750 m	
Standard Compliance	ISO/IEC 11801	type OM2 fiber
	IEC 60793-2-10	type A1a.1 fiber
	TIA/EIA	492AAAB-A

Optical Specifications

Bandwidth	High Performance EMB* (MHz.km): 850 at 850 nm only	Legacy Performance EMB** (MHz.km): 700 at 850 nm 500 at 1300 nm		
Attenuation	At 850 nm max. ≤ 2.3 dB/ km At 1300 nm max. ≤ 0.6 dB/ km			
Macrobend Loss	Mandrel Radius (mm):	Number of Turns:	Induced Attenuation (dB) at 850 nm:	Induced Attenuation (dB) at 1300 nm:
	37.5	100	≤ 0.05	≤ 0.15
	15	2	≤ 0.1	≤ 0.3
	7.5	2	≤ 0.2	≤ 0.5
Numerical Aperture	0,200 ± 0,015			

* Ensured via miniEMBc, per TIA/EIA 455-220A and IEC 60793-1-49, for high performance laser-based systems (up to 10Gb/s).

** OFL BW, per TIA/EIA 455-204 and IEC 60793-1-41, for legacy and LED-based systems (typically up to 100 Mb/s).

Dimensional Specifications

Core Diameter	50.0 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Core-Clad Concentricity	≤ 1.5 µm

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Cladding Non-Circularity	≤ 1.0%
Core Non-Circularity	≤ 5.0%
Coating Diameter	242 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

Environmental

Environmental Test	Test Condition	Induced Attenuation 850 nm & 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	≤ 0.10
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	≤ 0.10
Water Immersion	23°C ± 2°C	≤ 0.20
Heat Aging	85°C ± 2°C	≤ 0.20
Damp Heat	85°C at 85% RH	≤ 0.20
Operating Temperature Range: -60°C to +85°C		

Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GN/m²).
Length	Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

Refractive Index Difference	1%
Effective Group Index of Refraction	850 nm: 1.480 1300 nm: 1.479
Fatigue Resistance Parameter (nd)	20
Coating Strip Force	Dry: 0.6 lbs (2.7N) Wet: 14 days in 23°C water soak: 0.6 lbs (2.7N)
Chromatic Dispersion	Zero Dispersion Wavelength (λ ₀): 1295 nm ≤ λ ₀ ≤ 1315 nm Zero Dispersion Slope (S ₀): ≤ 0.101 ps/(nm²*km)

Product variants & accessories

Art.-No.	Description
L-IVHH02E09	FO Breakout cable 9/125µ G.652.D LSOH 2,0mm
L-IVHH02G50	FO Breakout cable 50/125µ OM2 LSOH 2,0mm
L-IVHH02G50-OM3	FO Breakout cable 50/125µ OM3 LSOH 2,0mm
L-IVHH02G50-OM4	FO Breakout cable 50/125µ OM4 LSOH 2,0mm
L-IVHH02G62	FO Breakout cable 62,5/125µ OM1 LSOH 2,0mm