FO Breakout cable 50/125µ OM3 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 FTTD 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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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 OM3 aqua, RAL 6027
Zero halogen, no corrosive gases	IEC 60754-1/-2, EN 60754-1/-2, VDE 0482-754-1/-2
Flame propagation	EC 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-OM3, 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. Cladding/Core 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 Bandbreite per TIA/EIA 455-204 and IEC 60793-1-41	1500 MHz x km	500 MHz x km
High Performance EMB, minEMBc, per TIA/EIA 455-220A and IEC 60793-1-49	2000 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® 50/125µ OM3 multimode fiber
Optimized Data Rate over Distance	40/100 Gb/s über 140 m* 10 Gb/s over 300 m 1 Gb/s over 1000 m
Standard Compliance	ISO/IEC 11801: type OM3 fiber IEC 60793-2-10: type A1a.2 fiber TIA/EIA: 492AAAC-B ITU: ITU G651.1
*	Distances specified in the 40G/100G per IEEE 802.3ba standard are 150m on OM4 and 100m on OM3; Corning fibers are manufactured to tighter dispersion specifications and thereby support the extended distances shown in the table (assuming cable attenuation ≤3.0 dB/km and same 1.0 dB of connector loss for OM3 that the standard requires for OM4).

Optical Specifications

Bandwidth	High Performance EMB* (MHz.km): 2000 at 850 nm only Legacy Performance EMB* (MHz.km): 1500 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): 37.5 / 15 / 7.5 Number of Turns: 100 / 2 / 2 Induced Attenuation (dB) at 850 nm: ≤ 0.05 / ≤ 0.1 / ≤ 0.2 Induced Attenuation (dB) at 1300 nm: ≤ 0.15 / ≤ 0.3 / ≤ 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 10 Gb/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
Cladding Non-Circularity	≤ 1.0%
Core Non-Circularity	≤ 5.0%
Coating Diameter	242 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

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Environmental

Enviromental 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)
Cromatic Dispersion	Zero Dispersion Wavelength (λ0): 1295 nm ≤λ0 ≤ 1315 nm Zero Dispersion Slope (S0): ≤ 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