FO Breakout cable 8G50/125µ OM4 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.

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Technical Data

Cable Data

Type	IVHH08G50/125 OM4
Fiber Amount	8
Construction	8
Outer Diameter	9.3 mm
Tolerance	± 0.3 mm

Subcable Diameter	2.0 (± 0.1mm)
Strength Members	Aramid yarns
Outer Jacket	LSOH (Halogen free, low smoke, flame retardant thermoplastic compound)
Jacket Colour	Magenta
Standard printing	“t d e – IVHH08G50-OM4-2.0” and sequential meter marking + Lot number

Mechanical/ Thermal Characteristics

Fiber Amount	8
Weight	70 kg/km
Tensile load	1200 N
Bending radius	20 x outer diameter
Operating temperature	-5°C to + 60°C
Fire resistance	Pass EN 50266, IEC 60332-3
Halogen content	Free EN 50267, IEC 60754
Smoke density	Low EN 50268, IEC 61034-1/2

Special features

Characteristics	Fiber and aramid yarn free movable in the compound
Identification	Numbers, min. every 25cm on subcables

FO Fiber

Type	Corning ClearCurve® 50/125µ OM4 multimode fiber
Optimized Data Rate over Distance	40/100 Gb over 170 m* 10 Gb/s over 550 m 1 Gb/s over 1100 m
Standard Compliance	ISO/IEC 11801: type OM4 fiber** IEC 60793-2-10: type A1a.3 fiber** TIA/EIA: 492AAAD 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)

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**	Assumes IEC draft standard is harmonized with 492AAAD which was approved by TIA

Optical Specifications

Bandwidth	High Performance EMB* (MHz.km): 4700 at 850 nm only Legacy Performance EMB** (MHz.km): 3500 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): 37.2 / 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 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
Cladding Non-Circularity	≤ 1.0%
Core Non-Circularity	≤ 5.0%
Coating Diameter	242 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

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.

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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 (λ_0): 1295 nm $\leq\lambda_0\leq$ 1315 nm Zero Dispersion Slope (S_0): $\leq$ 0.101 ps/(nm²*km)

Product variants & accessories

Art.-No.	Description
L-IVHH04G50-OM4-2.0	FO Breakout cable 4G50/125µ OM4 LSOH 2,0mm
L-IVHH08G50-OM4-2.0	FO Breakout cable 8G50/125µ OM4 LSOH 2,0mm
L-IVHH12G50-OM4-2.0	FO Breakout cable 12G50/125µ OM4 LSOH 2,0mm
L-IVHH24G50-OM4-2.0	FO Breakout cable 24G50/125µ OM4 LSOH 2,0mm

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