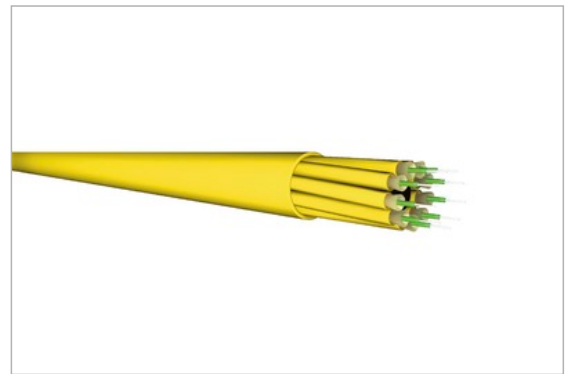


FO Breakout cable 12E9/125 μ G.652.D LSOH 2,0mm

Description

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.



Technical Data

Cable Data

Type	IVHH12E9/125
Fiber Amount	12
Construction	3 + 9
Outer Diameter	9.9 mm
Tolerance	± 0.5 mm

Subcable Diameter	2.0 (± 0.1 mm)
Strength Members	Aramid yarns
Outer Jacket	LSOH (Halogen free, low smoke, flame retardant thermoplastic compound)
Jacket Colour	Yellow
Standard printing	"t d e - IVHH12E09-2.0" and sequential meter marking + Lot number

Mechanical/ Thermal Characteristics

Fiber Amount	12
Weight	90 kg/km
Tensile load	1700 N
Bending radius	20 x outer diameter
Operating temperature	-5°C to + 60°C
Fire resistance	Pass EN 50266, IEC 60332-3

FO Breakout cable 12E9/125 μ G.652.D LSOH 2,0mm

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 SMF-28e+ [®] 09/125 μ OS2 G.652.D singlemode fiber
Maximum Attenuation	At 1310 nm max. 0.33 - 0.35 dB/km At 1383 \pm 3 nm max. 0.31 - 0.35 dB/km At 1490 nm max. 0.21 - 0.24 dB/km At 1550 nm max. 0.19 - 0.20 dB/km At 1625 nm max. 0.20 - 0.23 dB/km
Attenuation vs. Wavelength	Range: 1285 - 1330 nm; Ref. λ : 1310 nm; Max. Difference: 0.03 dB/km Range: 1525 - 1575 nm; Ref. λ : 1550 nm; Max. Difference: 0.02 dB/km
Macrobend Loss	Mandrel Diameter:32mm; Number of Turns: 1; Wavelength: 1550nm; Induced Attenuation: \leq 0.03 dB Mandrel Diameter:50mm; Number of Turns: 100; Wavelength: 1310nm; Induced Attenuation: \leq 0.03 dB Mandrel Diameter:50mm; Number of Turns: 100; Wavelength: 1550nm; Induced Attenuation: \leq 0.03 dB Mandrel Diameter:60mm; Number of Turns: 100; Wavelength: 1625nm; Induced Attenuation: \leq 0.03 dB
Point Discontinuity	Wavelength: 1310 nm; Point Discontinuity: \leq 0.05 dB Wavelength: 1550 nm; Point Discontinuity: \leq 0.05 dB
Cable Cutoff Wavelength (λ_{ccf})	$\lambda_{ccf} \leq 1260$ nm
Mode-Field Diameter	At 1310 nm = 9.2 ± 0.4 μ m At 1550 nm = 10.4 ± 0.5 μ m
Dispersion	At 1550 nm = ≤ 18.0 [ps/(nm*km)] At 1625 nm = ≤ 22.0 [ps/(nm*km)]
	Zero Dispersion Wavelength (λ_0): 1310 nm $\leq \lambda_0 \leq$ 1324 nm Zero Dispersion Slope (S_0): ≤ 0.092 ps/(nm ² *km)
Polarization Mode Dispersion (PMD)	PMD Link Design Value = ≤ 0.06 ps/ \sqrt km Maximum Individual Fiber = ≤ 0.1 ps/ \sqrt km
Norm	ITU-T Recommendation G.652 (Tables A, B, C, and D) IEC Specifications 60793-2-50 Type B1.3 TIA/EIA 492-CAAB Telcordia Generic Requirements GR-20-CORE ISO 11801 OS2

FO Breakout cable 12E9/125 μ G.652.D LSOH 2,0mm

Dimensional Specifications

Fiber Curl	≥ 4.0 m radius of curvature
Cladding Diameter	$125.0 \pm 0.7 \mu\text{m}$
Core-Clad Concentricity	$\leq 0.5 \mu\text{m}$
Cladding Non-Circularity	$\leq 0.7\%$
Coating Diameter	$242 \pm 5 \mu\text{m}$
Coating-Cladding Concentricity	$< 12 \mu\text{m}$

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 1310 nm, 1550 nm & 1625 nm
Temperature Dependence	-60°C to $+85^{\circ}\text{C}$	≤ 0.05
Temperature Humidity Cycling	-10°C to $+85^{\circ}\text{C}$ up to 98% RH	≤ 0.05
Water Immersion	$23^{\circ}\text{C} \pm 2^{\circ}\text{C}$	≤ 0.05
Heat Aging	$85^{\circ}\text{C} \pm 2^{\circ}\text{C}$	≤ 0.05
Operating Temperature Range	-60°C to $+85^{\circ}\text{C}$	

Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GPa).
Length	Fiber lengths available up to 63.0 km/spool.

Performance Characterizations

Core Diameter	$8.2 \mu\text{m}$
Numerical Aperture	0.14
Zero Dispersion Wavelength (λ_0)	1317 nm
Zero Dispersion Slope (S_0)	$0.088 \text{ ps}/(\text{nm}^2 \cdot \text{km})$
Effective Group Index of Refraction	1310 nm: 1.4676 1550 nm: 1.4682
Fatigue Resistance Parameter (nd)	20
Coating Strip Force	Dry: 0.6 lbs (3N) Wet: 14 days room temperature: 0.6 lbs (3N)
Rayleigh Backscatter Coefficient (for 1 ns Pulse Width)	1310 nm: -77 dB 1550 nm: -82 dB

FO Breakout cable 12E9/125 μ G.652.D LSOH 2,0mm

Art.-No.	Description
L-IVHH04E09X-2.0	FO Breakout cable 4E9/125 μ G.657.A1 Ultra LSOH 2,0mm
L-IVHH08E09-2.0	FO Breakout cable 8E9/125 μ G.652.D LSOH 2,0mm
L-IVHH12E09-2.0	FO Breakout cable 12E9/125 μ G.652.D LSOH 2,0mm
L-IVHH24E09-2.0	FO Breakout cable 24E9/125 μ G.652.D LSOH 2,0mm