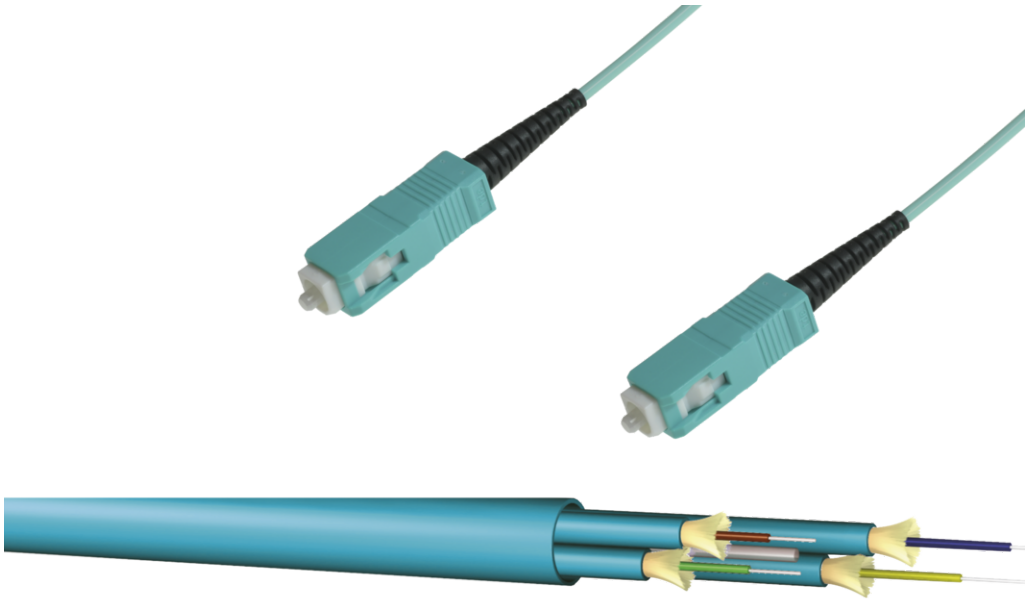
FO Breakoutl cable 4x SC/4x SC 4G50/125µ OM3 LSHF, Length: xxxx



tde - Fiber Optic Assemblies

The tde patch and trunk cables are manufactured completely at the German facility in Ohrte. Production processes at tde meet the latest standards, and the company has one of the most up-to-date fiber optic assembly houses in Europe. Fiber optic patch cables and trunk cables are manufactured in many different configurations using highly automated processes on two independent mass production lines. The range of products on offer encompasses the entire spectrum of connector types available on the market. Production capacity is around 100,000 fiber optic connectors per month, and this can be ramped up easily whenever required. To guarantee consistently top quality, only the best components from renowned vendors are used. All tde production staff have the necessary qualifications and education, and have been well trained in using specialist technical equipment such as laser cleavers and glue-dispensing robots.
Each cable application is subjected to a full test procedure comprising interferometer measurements, insertion loss and return loss measurements and a final visual inspection to ensure that only 100% error-free products are shipped to the customer.

Products made by tde perform at least internationally accepted quality standards and norms. The quality management system is ISO 9001, ISO 14001 and TL9000 certified.

tde® trans data elektronik GmbH

Headquarter address:
Lingener Str. 2
D-49626 Bippen/Ohrte
Tel.: +49 5435 9511 0
Fax.: +49 5435 9511 32

Sales office address:
Prinz-Friedrich-Karl-Str. 46
D-44135 Dortmund
Tel.: +49 231 8805 61 13
Fax.: +49 231 8805 61 15

info@tde.de | www.tde.de

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Technical Data

FO Connectors

Connector Type	SC Simplex
Housing	Plastic, Aqua
Ferrule	Zirconia Straight Split, Spring-loaded Axially
Ferrule Hole	126 µ
Mating Cycles	1.000
Operating Temperature	-40°C up to +75°C
Strain Relief to	150 N
Manufacturer	tde

Optical performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125µ OM3	SC	850 nm	≤ 0.20 dB	0.35 dB	30 dB

FO Cables

Cable Data

Type	IVHH04G50/125 OM3
Fiber Amount	4
Construction	4
Outer Diameter	7.0 mm
Tolerance	± 0.3 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	Aqua
Standard printing	“t d e – IVHH04G50-OM3-2.0” and sequential meter marking + Lot number

Mechanical/Thermal Characteristics

Fiber Amount	4
Weight	48 kg/km
Tensile load	1000 N
Bending radius	15 x outer diameter
Operating temperature	-5°C bis +60°C IEC 60794-2-20
Fire resistance	EN 50266, IEC 60332
Halogen content	EN 50267, IEC 60754-1/-2
Smoke density	EN 50268, IEC 61034-1/-2

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Special features

Characteristics	Fiber and aramid yarn free movable in the compound
Identification	Numbers, every 2cm on subcables

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
P-SC/SC50V04G3-xxxx	FO Breakoutl cable 4x SC/4x SC 4G50/125µ OM3 LSHF, Length: xxxx
P-SC/SC50V08G3-xxxx	FO Breakoutl cable 8x SC/8x SC 8G50/125µ OM3 LSHF, Length: xxxx
P-SC/SC50V12G3-xxxx	FO Breakoutl cable 12x SC/12x SC 12G50/125µ OM3 LSHF, Length: xxxx
P-SC/SC50V24G3-xxxx	FO Breakoutl cable 24x SC/24x SC 24G50/125µ OM3 LSHF, Length: xxxx

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