FO Patch cord MPO/MPO Female/Male 12G50/125µ LSOH OM3, Type B, Length: xxx



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 trunk cable is preterminated with MPO/MTP®connectors on both ends. The patch cord is very slim and flexible. Each cable is marked with serial- and part nummbers.

Cable	Round cable 3mm diameter, Loose tube construction, FRNC, Aqua
Connectot	MPO/MTP®Female/Male Push Pull locking (aqua)
Configuration	Method B
Tests	Interferometer, Insertion Loss, Return Loss and Visual Final Inspection; all measured values are electronically archived
	QS-Managementsystem ISO 9001, ISO 14001 and TL 9000

xxx - stands for the cable length in m (every length available)

FO Connectors

Connector

Type	MPO/MTP® Female Push Pull Locking (aqua)
Ferrule	12 Fiber MM Elite® ferrule, PPS
Boot colour	Black
Manufacturer	tde/US Conec

Optical Performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125µ OM3	MPO/MTP®	850 nm	≤ 0.14 dB	0.25 dB	35 dB

FO Connectors

Connector

Type	MPO/MTP® Male Push Pull Locking (aqua)
Ferrule	12 Fiber MM Elite® ferrule, PPS
Boot colour	Black
Manufacturer	tde/US Conec

Optical Performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125µ OM3	MPO/MTP®	850 nm	≤ 0.14 dB	0.25 dB	35 dB

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FO Cables

Standards	EN 50173-5
	IEC 60794-2-20
	ISO/IEC 24764
Flame resistance	IEC 60332-1-2
	IEC 60332-2-2
	IEC 60754-1
	IEC 60754-2
	IEC 61034

Cable construction

Type	IVH12G50-OM3
Loose tube	12 coated fibers within PVC-core tube
Wall thickness PVC-tube	0.20 mm – 0.25 mm
Fiber type	MM-OM3, 50/125µ, Corning ClearCurve OM3
Strength members	Aramid yarn
Outer jacket	LSZH (Halogen free, low smoke, flame retardant thermoplastic compound)
Jacket color	Aqua, RAL 6027
Identification	"t d e – IVH12G50-MPO-OM3 LSZH" and sequential meter marking + Lot number

Physical properties

Outer diameter cable	3.0 ± 0.1 mm
Diameter PVC-core tube	1.8 ± 0.1 mm
Max. tensile load	300 N
Min. bending radius	30 mm
Temperature range (storage, installation, operation)	-20°C to +70°C

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).

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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

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

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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-MP/MP50I12G3Axxx	FO Patch cord MPO/MPO Female 12G50/125µ OM3 LSOH, Type A, Length: xxx
P-MP/MP50I12G3Bxxx	FO Patch cord MPO/MPO Female 12G50/125µ OM3 LSOH, Type B, Length: xxx
P-MP/MPP50I12G3Axxx	FO Patch cord MPO/MPO Female/Male 12G50/125µ LSOH OM3, Type A, Length: xxx
P-MP/MPP50I12G3Bxxx	FO Patch cord MPO/MPO Female/Male 12G50/125µ LSOH OM3, Type B, Length: xxx
P-MPP/MPP50I12G3Axxx	FO Patch cord MPO/MPO Male 12G50/125µ OM3 LSOH, Type A, Length: xxx
P-MPP/MPP50I12G3Bxxx	FO Patch cord MPO/MPO Male 12G50/125µ OM3 LSOH, Type B, Length: xxx

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