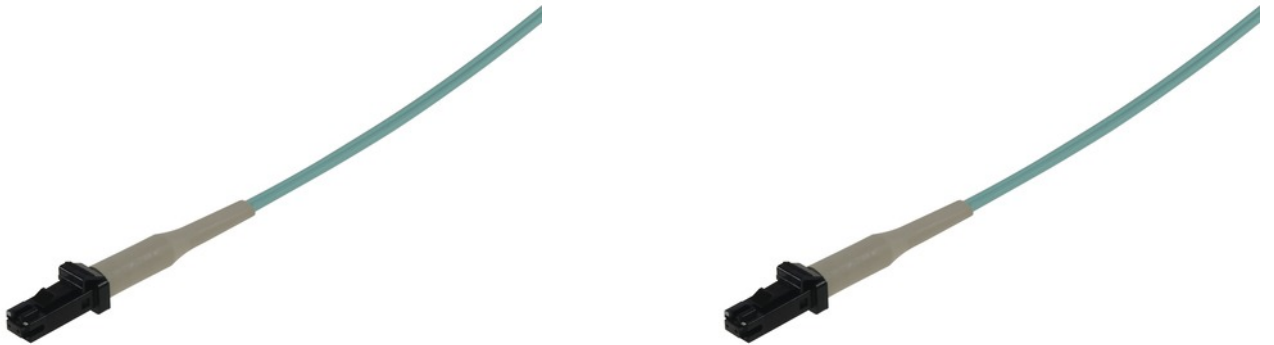


tde - FO Cable Pigtail MTRJ 50/125 $\mu$  OM3 Duplex MiniZip LSOH Length: xxxxx



## 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.



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tde - FO Cable Pigtail MTRJ 50/125 $\mu$  OM3 Duplex MiniZip LSOH Length: xxxxx

## Technical Data

### FO Connectors

Type	MTRJ w/o pins
Ferrule	MT-Ferrule
Ferrule Hole	126 $\mu$
Connector colour	Black
Boot colour	Beige
Manufacturer	tde

### Optical performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125 $\mu$ OM3	MTRJ	850 nm	$\leq 0.35$ dB	0.45 dB	20 dB

## FO Cables

### Cable Data

Type	IVH02G50 OM3
Fiber Amount	2
Fiber Type	MM-OM3, 50/125 $\mu$ , Corning ClearCurve
Secondary Coating	600 $\mu$ , easy strippable
Strength Members	Aramid yarns
Outer Jacket	LSOH (Halogen free, low smoke, flame retardant thermoplastic compound)
Jacket Colour	Magenta
Outer Diameter	2x 1.8 ( $\pm 0.1$ mm)
Standard printing	"t d e - IVH02G50-OM3-1.8 LSZH" and sequential meter marking + Lot number
Applications	Patchcords/ Pigtails

### Mechanical/ Thermal Characteristics

Weight	12 kg/km
Operational tensile load	210 N
Bending radius	15 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
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tde - FO Cable Pigtail MTRJ 50/125 $\mu$  OM3 Duplex MiniZip LSOH Length: xxxxx

## FO Fiber

Type	Corning ClearCurve <sup>®</sup> 50/125 $\mu$ 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 $\leq 3.0$ 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. $\leq 2.3$ dB/km At 1300 nm max. $\leq 0.6$ dB/km
Macrobend Loss	Mandrel Radius (mm): 37.5 / 15 / 7.5 Number of Turns: 100 / 2 / 2 Induced Attenuation (dB) at 850 nm: $\leq 0.05$ / $\leq 0.1$ / $\leq 0.2$ Induced Attenuation (dB) at 1300 nm: $\leq 0.15$ / $\leq 0.3$ / $\leq 0.5$
Numerical Aperture	0.200 $\pm$ 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 $\pm$ 2.5 $\mu$ m
Cladding Diameter	125.0 $\pm$ 1.0 $\mu$ m
Core-Clad Concentricity	$\leq 1.5$ $\mu$ m
Cladding Non-Circularity	$\leq 1.0\%$
Core Non-Circularity	$\leq 5.0\%$
Coating Diameter	242 $\pm$ 5 $\mu$ m
Coating-Cladding Concentricity	$< 12$ $\mu$ m

## Environmental

Environmental Test	Test Condition	Induced Attenuation 850 nm & 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	$\leq 0.10$
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	$\leq 0.10$
Water Immersion	23°C $\pm$ 2°C	$\leq 0.20$
Heat Aging	85°C $\pm$ 2°C	$\leq 0.20$
Damp Heat	85°C at 85% RH	$\leq 0.20$

## tde - FO Cable Pigtail MTRJ 50/125 $\mu$ OM3 Duplex MiniZip LSOH Length: xxxxx

Operating Temperature Range	-60°C to +85°C
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### Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress $\geq 100$ kpsi (0.7 GN/m <sup>2</sup> ).
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)
Chromatic Dispersion	Zero Dispersion Wavelength ( $\lambda_0$ ): 1295 nm $\leq \lambda_0 \leq$ 1315 nm Zero Dispersion Slope (S0): $\leq 0.101$ ps/(nm <sup>2</sup> *km)

### Product variants & accessories

Art.-No.	Description
L-MT/-09D-Mxxxxx	tde - FO Cable Pigtail MTRJ 9/125 $\mu$ OS2 Duplex MiniZip LSOH Length: xxxxx
L-MT/-50D3Mxxxxx	tde - FO Cable Pigtail MTRJ 50/125 $\mu$ OM3 Duplex MiniZip LSOH Length: xxxxx
L-MT/-50D-Mxxxxx	tde - FO Cable Pigtail MTRJ 50/125 $\mu$ OM2 Duplex MiniZip LSOH Length: xxxxx
L-MT/-62D-Mxxxxx	tde - FO Cable Pigtail MTRJ 62,5/125 $\mu$ OM1 Duplex MiniZip LSOH Length: xxxxx