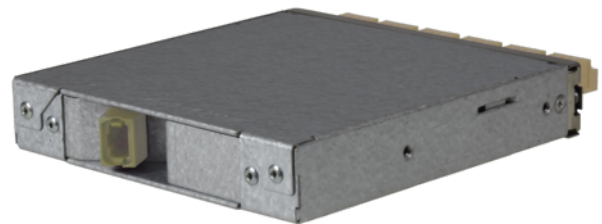


tML[®] - FO Module MPO/MTP[®] with Pins/6x LC Duplex 62,5/125 μ OM1



tML[®] - tde Modular Link

tML[®] is a patented, modular cabling system consisting of the three key components module, trunk cable and rack mount enclosure. The system components are 100 percent manufactured, pre-assembled and tested in Germany. They enable plug-and-play installation on site - especially in data centres, but also in industrial environments - within the shortest possible time. The system is characterized by highest packing density and highest flexibility during migration to higher transmission rates. Fibre optic and TP modules can be combined in one rack mount enclosure. 96x fibre optics LC Duplex or 96x MPO connectors can be used modularly on a 19-inch height unit. Thanks to its patented polarity and dark fibre modules, the tML system offers the simplest migration options to 100G and more.

The tML[®] - FO Module MPO/MTP[®] is intended for the installation in the tML[®] Rack Mount Enclosure 1U (for 8 x Modules).



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Technical Data

The end faces of the connectors are optimized by means of Lasercleaving and machine polish. The MPO/MTP[®]plug has a defined fiber height of 1 - 3.5 μ . The max. adjacent fiber height difference is 0.2 μ m and for all fibers 0.3 μ m. All system components (modules, trunk cables and patch cords) are co-ordinated for the reaching of the performance particularly. The module is marked with sequential serial number and article number. The modules are ROHS compliant.

Entry	1 x MPO/MTP [®] Male Adapter (beige) back
Exit	6 x LC Duplex Adapter (beige) front
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

Box	Galvanized steel sheet
Front Panel	Stainless steel
Dimensions	110 x 108 x 20 mm

FO Adapters

Type	MPO/MTP [®]
Application	Multimode OM1/OM2
Design	without Flange
Connector style	SC Simplex
Key Orientation	Type A, Key up/down
Color	Beige
Material	Plastic
Sleeve	--
Shutter	--
Standards	IEC 61754-7 TIA 604-5
Manufacturer	US Conec

FO Adapters

Type	LC Duplex
Application	Multimode
Design	One-Piece without flange
Connector style	SC Simplex
Color	Beige
Material	Plastic
Sleeve	Zirconia Straight Split
Shutter	-
Manufacturer	tde

tML[®] - FO Module MPO/MTP[®] with Pins/6x LC Duplex 62,5/125μ OM1

FO Connectors

The end faces of the connectors are optimized by means of Lasercleaving and machine polish. The MPO/MTP[®] plug has a defined fiber height of 1 - 3.5μ. The max. adjacent fiber height difference is 0.2μm and for all fibers 0.3μm.

Connector

Type	MPO/MTP [®] Male Push Pull Locking with Elite Pins (beige)
Ferrule	12 Fiber MM Elite [®] ferrule, PPS
Boot colour	Black
Temperature range	-40°C to +75°C
Manufacturer	tde/US Conec

Optical Performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125μ OM2	MPO/MTP [®]	850 nm	≤ 0.25 dB	0.45 dB	20 dB
62.5/125μ OM1	MPO/MTP [®]	850 nm	≤ 0.25 dB	0.45 dB	

FO Connectors

Connector Type	LC Unibody Simplex
Housing	Plastic, Beige
Ferrule	Zirkonia Staight Split, Spring-loaded Axially
Ferrule Hole	126 μ
Mating Cycles	1.000
Operating Temperature	-40°C up to +75°C
Strain Relief to	100 N
Manufacturer	tde

Optical performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125μ OM2	LC	850 nm	≤ 0.25 dB	0.45 dB	30 dB
62.5/125μ OM1	LC	850 nm	≤ 0.25 dB	0.45 dB	

FO Fiber

Type	Corning 62.5/125μ OM1 multimode fiber
Manufacturer	Corning

Optical Specifications

Bandwidth	160/200 at 850 nm / 500 at 1300 nm
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tML[®] - FO Module MPO/MTP[®] with Pins/6x LC Duplex 62,5/125 μ OM1

Attenuation	At 850 nm max. \leq 3.0 dB/km At 1300 nm max. \leq 0.7 dB/km
Numerical Aperture	0.275 \pm 0.015

Dimensional Specifications

Core Diameter	62.5 \pm 3.0 μ m
Cladding Diameter	125.0 \pm 2.0 μ m
Core-Clad Concentricity	\leq 3.0 μ m
Cladding Non-Circularity	< 2.0%
Core Non-Circularity	\leq 5.0%
Coating Diameter	245 \pm 5 μ m
Coating-Cladding Concentricity	< 12 μ m

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 850 nm and 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	\leq 0.20
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	\leq 0.20
Operating Temperature Range	-60°C to +85°C	

Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress \geq 100 kpsi (0.7 GN/m ²).
Length	Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

Refractive Index Difference	2%
Effective Group Index of Refraction	850 nm: 1.496 1300 nm: 1.491
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 (λ_0): 1332 nm \leq $\lambda_0 \leq$ 1354 nm Zero Dispersion Slope (S0): \leq 0.097 ps/(nm ² *km)

Product variants & accessories

Art.-No.	Description
TML-M06LCADKH/MPP09E	tML [®] - FO Module MPO/MTP [®] with Pins/6x LC APC Duplex 9/125 μ OS2
TML-M06LCDKH/MPP09E	tML [®] - FO Module MPO/MTP [®] with Pins/6x LC Duplex 9/125 μ OS2
TML-M06LCDKH/MPP50G	tML [®] - FO Module MPO/MTP [®] with Pins/6x LC Duplex 50/125 μ OM2
TML-M06LCDKH/MPP50G3	tML [®] - FO Module MPO/MTP [®] with Pins/6x LC Duplex 50/125 μ OM3

tML[®] - FO Module MPO/MTP[®] with Pins/6x LC Duplex 62,5/125 μ OM1

Art.-No.	Description
TML-M06LCDKH/MPP50G4	tML [®] - FO Module MPO/MTP [®] with Pins/6x LC Duplex 50/125 μ OM4
TML-M06LCDKH/MPP62G	tML [®] - FO Module MPO/MTP [®] with Pins/6x LC Duplex 62,5/125 μ OM1