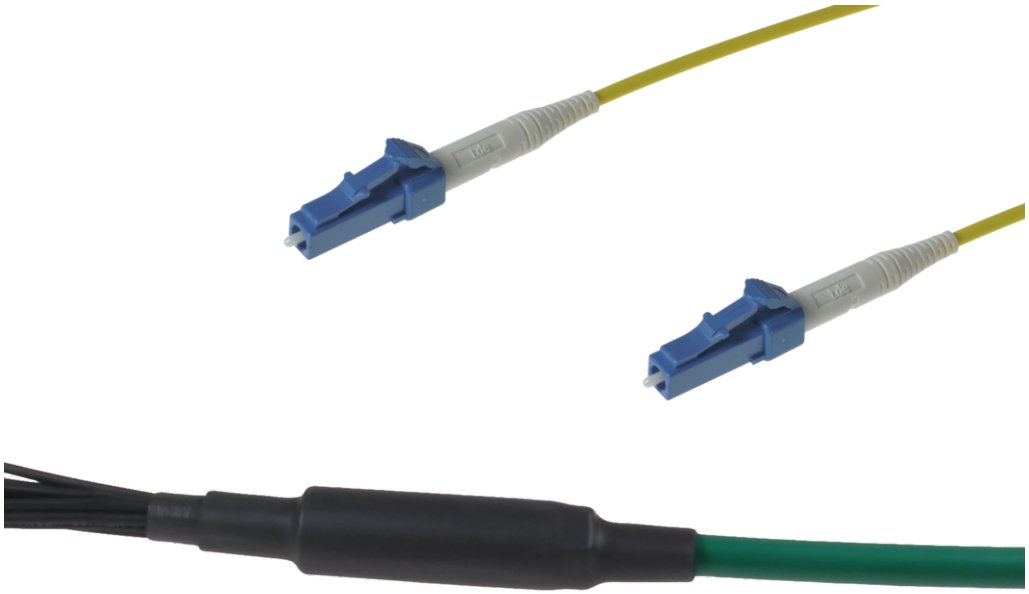
FO Universal Cable 24x LC/24x LC 24E9/125µ OS2 LSHF, Length: xxxx



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.

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Technical Data

FO Connectors

Connector Type	LC UPC Unibody Simplex
Housing	Plastic, Blue
Ferrule	Zirconia Straight Split, Spring-loaded Axially
Ferrul Hole	125.5 µ
Ferrule Concentricity	≤ 0.6 µ
Mating Cycles	500
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.
9/125µ	LC UPC	1310 / 1550 nm	≤ 0.10 dB	0.25 dB	55 dB

FO Fan-Out

Fan-out length	50 mm
Ø Fan-out	16 mm
Ø Single unit	1.7 - 2 mm
Single unit length	78 ± 5 cm (not stepped)

FO Cables

Mechanical characteristics

Temperature range	Storage -25 to +70°C, IEC 60794-1-22 F1
	Pulling in -10 to +50°C
	Operation -25 to +60°C
Tensile performance	IEC 60794-1-21 E1
Crush resistance	IEC 60794-1-21 E3
Impact	IEC 60794-1-21 E4
Repeated bending	IEC 60794-1-21 E6
Torsion	IEC 60794-1-21 E7
Bend	IEC 60794-1-21 E11
Water penetration	IEC 60794-1-22 F5

General characteristics

Sheath colour	green, similar to RAL 6016
Zero halogen, no corrosive gases	IEC 60754-1/-2, EN 60754-1/-2, VDE 0482-754-1/-2

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Flame propagation	IEC 60332-1-2, EN 60332-1-2, VDE 0482-332-1-2
Flame spread	IEC 60332-3-24, EN 50266-2-4, VDE 0482-266-2-4
Reaction to fire (Euroclasses)	cIEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2
Reaction to fire (Euroclasses)	EN 13501-6: D_{ca}

Cabletype	Universal U-DQ(ZN)BH for indoor and outdoor use
	non metallic, dry interstices, rodent protection, flame retardant, in accordance with IEC 60332.1 and IEC 60332.3 C
Fibertype	E9/125 G.652.D
No. of fibers	24
Loose tube	1
Sheath ø	8.2 mm
Weight	72 kg/km
Bending radius	125 mm
Tensile load short term	3,500 N
Tensile load continuous	1.500 N
Crush resistance short term	5.000 N
Crush resistance continuous	3.000 N
Fire load	336 kWh/km
	1210 MJ/km

Length tolerances (prefabricated with plugs)

Tolerances for lengths up to 40m	± 100 cm
Tolerances for lengths up to 100m	± 100 cm
Tolerances for lengths from 100m	± 2%

FO Fiber

Optical properties

Maximum attenuation (cabled)	1310 nm: 0.34 / 1383 nm: 0.34* dB/km (*post hydrogen aging performance)
Maximum Chromatic Dispersion	3.5 ps/(nm x km)
Zero Dispersion Wavelength λ0	1304 ≤λ0≤ 1324 nm
Maximim Zero Dispersion Slope So	0.092 ps/(nm² x km)
Mode-Filed Diameter	9.2 +/- 0,4 µm
Maximum Cable Cut-off Wavelength λCC	1260 nm
PDM Link Design Value	≤ 0.04 ps/√km
Max. individual fibre PMD	≤ 0.1 ps/√km
Max. individual cable PMD	≤ 0.2 ps/√km
Refractive Index	1.4676

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FO Universal Cable 24x LC/24x LC 24E9/125µ OS2 LSHF, Length: xxxx

Mechanical properties

Cladding diameter	125.0 +/- 1.0 µm
Maximum Core/Cladding Concentricity Error	0.5 µm
Maximum Cladding Non-Circularity	0.7 %
Coating diameter	245 +/-5 µm
Maximum Cladding/Coating Concentricity Error	12 µm
Operating temperature range	-60 to +85°C
Test load	100 kpsi

Product variants & accessories

Art.-No.	Description
P-LC/LC09B12Exxxx	FO Universal Cable 12x LC/12x LC 12E9/125µ OS2 LSHF, Length: xxxx
P-LC/LC09B24Exxxx	FO Universal Cable 24x LC/24x LC 24E9/125µ OS2 LSHF, Length: xxxx
P-LC/LC09B48Exxxx	FO Universal Cable 48x LC/48x LC 48E9/125µ OS2 LSHF, Length: xxxx
P-LC/LC09B72Exxxx	FO Universal Cable 72x LC/72x LC 72E9/125µ OS2 LSHF, Length: xxxx
P-LC/LC09B96Exxxx	FO Universal Cable 96x LC/96x LC 96E9/125µ OS2 LSHF, Length: xxxx

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