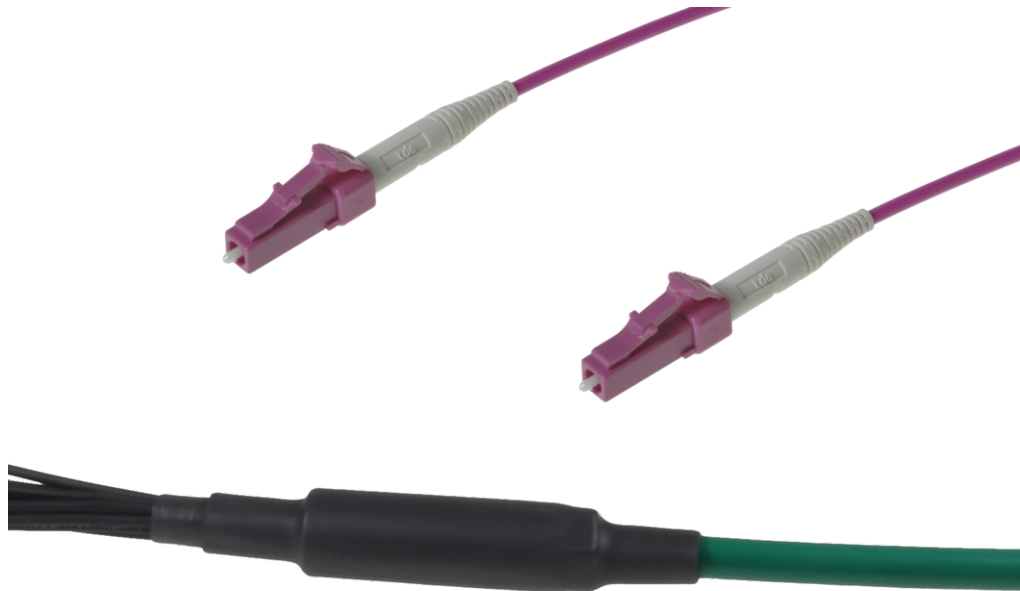


FO Universal Cable 48x LC/48x LC 48G50/125 $\mu$  OM4 LSHF, Length: xxxx



## 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<sup>®</sup> 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

FO Universal Cable 48x LC/48x LC 48G50/125 $\mu$  OM4 LSHF, Length: xxxx

## Technical Data

### FO Connectors

Connector Type	LC Unibody Simplex
Housing	Plastic, Magenta
Ferrule	Zirkonia Staight Split, Spring-loaded Axially
Ferrule Hole	126 $\mu$
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.
50/125 $\mu$ OM4	LC	850 nm	$\leq$ 0.25 dB	0.45 dB	30 dB

### FO Fan-Out

Fan-out length	50 mm
$\varnothing$ Fan-out	approx 16 - 19 mm
$\varnothing$ Single unit	1.7 - 2.0 mm
Shortest Single unit length	68 $\pm$ 5 cm
Highest Single unit length	78 $\pm$ 5 cm
Number of stepping	2

### 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
---------------	----------------------------

## FO Universal Cable 48x LC/48x LC 48G50/125μ OM4 LSHF, Length: xxxx

Zero halogen, no corrosive gases	IEC 60754-1/-2, EN 60754-1/-2, VDE 0482-754-1/-2
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
Smoke density	IEC 61034-1/-2, EN 61034-1/-2, VDE 0482-1034-1/-2
Reaction to fire (Euroclasses)	EN 13501-6: E <sub>ca</sub>

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	Corning G50/125 OM4
No. of fibers	48
Loose tube	4
Sheath ø	11.4 mm
Weight	149 kg/km
Bending radius	175 mm
Tensile load short term	9.000 N
Tensile load continuous	5.000 N
Crush resistance short term	5.000 N
Crush resistance continuous	3.000 N
Fire load	616 kWh/km
	2218 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

Attenuation typical (cabled)	850 nm: 2.5 / 1300 nm: 0.5 dB/km
Attenuation maximum (cabled)	850 nm: 2.7 / 1300 nm: 0.7 dB/km
OFL bandwidth as per TIA/EIA 455-204 and IEC 60793-1-41	850 nm: 3500 / 1300 nm: 500 MHz x km
High-Performance EMB bandwidth as per TIA/EIA 455-220A and IEC 60793-1-49	850 nm: 4700 / 1300 nm: 4700 MHz x km
Refractive Index	850 nm: 1.480 / 1300 nm: 1.479

### Technical properties

Bending radius	No. of windings (turns)	Max. induced attenuation
37.5 mm	100	850 nm: ≤ 0.05 / 1300 nm: ≤ 0.15 dB/km

## FO Universal Cable 48x LC/48x LC 48G50/125 $\mu$ OM4 LSHF, Length: xxxx

15 mm	2	850 nm: $\leq 0.1$ / 1300 nm: $\leq 0.3$ dB/km
7.5 mm	2	850 nm: $\leq 0.2$ / 1300 nm: $\leq 0.5$ dB/km

### Geometrical and mechanical characteristics

Numerical Aperture	0.200 +/- 0.015
Core $\varnothing$	50.0 +/- 2.5 $\mu$ m
Maximum Core Non-Circularity	5 %
Cladding $\varnothing$	125.0 +/- 1.0 $\mu$ m
Maximum Cladding Non-Circularity	1.0 %
Maximum Cladding/Core Concentricity Error	1.5 $\mu$ m
Maximum Coating Concentricity Error	12 $\mu$ m
Coating $\varnothing$	242 +/- 5 $\mu$ m
Test load	100 kpsi

### Product variants & accessories

Art.-No.	Description
L-LC/LC50B12G4-xxxx	FO Universal Cable 12x LC Simplex/12x LC Simplex 12G50/125 $\mu$ OM4 LSHF, Length: xxxx
L-LC/LC50B24G4-xxxx	FO Universal Cable 24x LC/24x LC 24G50/125 $\mu$ OM4 LSHF, Length: xxxx
L-LC/LC50B48G4-xxxx	FO Universal Cable 48x LC/48x LC 48G50/125 $\mu$ OM4 LSHF, Length: xxxx
L-LC/LC50B72G4-xxxx	FO Universal Cable 72x LC/72x LC 72G50/125 $\mu$ OM4 LSHF, Length: xxxx
L-LC/LC50B96G4-xxxx	FO Universal Cable 96x LC/96x LC 96G50/125 $\mu$ OM4 LSHF, Length: xxxx