

FO Universal Cable 48x SC/48x SC 48G50/125μ OM2 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	SC Simplex
Housing	Plastic, Beige
Ferrule	Zirconia Straight Split, Spring-loaded Axially
Ferrule Hole	126 μ
Mating Cycles	1.000
Operating Temperature	-40°C up to +75°C
Strain Relief to	150 N
Manufacturer	tde

Optical performance

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

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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
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 _{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	Corning G50/125 OM2
No. of fibers	48
Loose tube	4
Sheath \varnothing	11.4 mm
Weight	148 kg/km
Bending radius	175 mm
Tensile load	6000 N
Crush resistance	3000 N continuous
	5000 N short term
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	$\pm 2\%$

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: 700 / 1300 nm: 500 MHz x km
High-Performance EMB bandwidth as per TIA/EIA 455-220A and IEC 60793-1-49	850 nm: 850 MHz x km
Refractive Index	850 nm: 1.480 / 1300 nm: 1.479

Technical properties

Bending radius		No. of windings (turns)	Max. induced attenuation
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37.5 mm	100	850 nm: ≤ 0.05 / 1300 nm: ≤ 0.15 dB/km
15 mm	2	850 nm: ≤ 0.1 / 1300 nm: ≤ 0.3 dB/km
7.5 mm	2	850 nm: ≤ 0.2 / 1300 nm: ≤ 0.5 dB/km

Geometrical and mechanical characteristics

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

Product variants & accessories

Art.-No.	Description
L-SC/SC50B12Gxxxx	FO Universal Cable 12x SC/12x SC 12G50/125 μ OM2 LSHF, Length: xxxx
L-SC/SC50B24Gxxxx	FO Universal Cable 24x SC/24x SC 24G50/125 μ OM2 LSHF, Length: xxxx
L-SC/SC50B48Gxxxx	FO Universal Cable 48x SC/48x SC 48G50/125 μ OM2 LSHF, Length: xxxx
L-SC/SC50B72Gxxxx	FO Universal Cable 72x SC/72x SC 72G50/125 μ OM2 LSHF, Length: xxxx
L-SC/SC50B96Gxxxx	FO Universal Cable 96x SC/96x SC 96G50/125 μ OM2 LSHF, Length: xxxx