

tde - FO Fiberpigtail SC 50/125µ OM2 Length: 2m



# 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	Туре	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125μ OM2	SC	850 nm	$\leq 0.25 \text{ dB}$	0.45 dB	30 dB
62.5/125μ OM1	SC	850 nm	≤ 0.25 dB	0.45 dB	

### FO Cables

Tight Buffer	Low smoke (IEC 61034 and EN 50268) and free of halogens (LSOH)
	Non corrosive after IEC 60754-2 and EN 50267
	Flame resistent after IEC 60332-3C and EN 50266-2-4
	Completly dry design
	Free from metal, no grounding problems and potential differences
	Tight Buffer for simple and direct connector mounting

#### Characteristics

Fiber Count	1 (Tight Buffer)
Core-Ø	0.9 mm
Coreweight	1 kg/km
Min. Bending radius - Installation	30 mm
Min. Bending radius - Operation	30 mm
Removal	1500 mm
Fire load	0.15 MJ/m
Temperature range - Installation	-5 to +50°C
Temperature range - Operation	-20 to +60°C
Temperature range - Transport / Lagerung	-25 to +70°C

### FO Fiber

Туре	Corning 50/125µ OM2 multimode fiber	
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### **Optical Specifications**

Bandwidth	500 at 850 nm / 500 at 1300 nm
	At 850 nm max. $\leq$ 2.5 dB/km At 1300 nm max. $\leq$ 0.8 dB/km
Numerical Aperture	$0.200 \pm 0.015$

### **Dimensional Specifications**

Core Diameter	$50.0 \pm 3.0 \ \mu m$
Cladding Diameter	125.0 ± 2.0 μm
Core-Clad Concentricity	≤ 3.0 µm
Cladding Non-Circularity	< 2.0%
Core Non-Circularity	≤ 5.0%
Coating Diameter	$245 \pm 5 \mu m$
Coating-Cladding Concentricity	< 12 μm

### **Environmental Specifications**

Enviromental Test	Test Condition	Induced Attenuation 850 nm and 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	≤ 0.20
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	≤ 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 <sup>2</sup> ).
Length	Fiber lengths available up to 8.8 km/spool.

### **Performance Characterizations**

Refractive Index Difference	2%
Effective Group Index of Refraction	850 nm: 1.490 1300 nm: 1.486
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)
Cromatic Dispersion	Zero Dispersion Wavelength ( $\lambda 0$ ): 1300 nm $\leq \lambda 0 \leq$ 1320 nm Zero Dispersion Slope (S0): $\leq$ 0.101 ps/(nm <sup>2*</sup> km)

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# **Product variants & accessories**

ArtNo.	Description
L-SC/-09F00200	tde - FO Fiberpigtail SC PC 9/125μ OS2 Length: 2m
L-SC/-50F00200	tde - FO Fiberpigtail SC 50/125µ OM2 Length: 2m
L-SC/-50F3-00200	tde - FO Fiberpigtail SC 50/125μ OM3 Length: 2m
L-SC/-50F4-00200	tde - FO Fiberpigtail SC 50/125µ OM4 Length: 2m, violet
L-SC/-62F00200	tde - FO Fiberpigtail SC 62,5/125µ OM1 Length: 2m
L-SC9/-09F00200	tde - FO Fiberpigtail SC APC 9° 9/125µ OS2 Length: 2m
L-SCA/-09F00200	tde - FO Fiberpigtail SC APC 9/125µ OS2 Length: 2m

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