

Description

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.



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. |
|---------------|------|------------|---------------------|---------------------|------------------|
| 50/125µ OM2 | SC | 850 nm | ≤ 0.25 dB | 0.45 dB | 30 dB |
| 62.5/125µ OM1 | SC | 850 nm | ≤ 0.25 dB | 0.45 dB | |

FO Cables

| | |
|------------------|-------------|
| Flame resistance | IEC 60332-3 |
| | IEC 60754 |
| | IEC 61034-1 |
| | IEC 61034-2 |

Cable construction

| | |
|------------------|--|
| Tight buffer | 1x 900 μ coated fiber (free movable in the compound) |
| Fiber type | MM-OM2, 50/125 μ , Corning |
| Strength members | Aramid yarn (free movable in the compound) |
| Outer jacket | LSZH (Halogen free, low smoke, flame retardant thermoplastic compound) |
| Jacket color | Orange, RAL 2003 |
| Identification | "t d e – IVH01G50-2.4 LSZH" and sequential meter marking + Lot number |

Physical properties

| | |
|----------------------|------------------|
| Outer diameter cable | 2.4 \pm 0.1 mm |
| Temperature range | -20°C to +70°C |

FO Fiber

| | |
|--------------|--|
| Type | Corning 50/125 μ OM2 multimode fiber |
| Manufacturer | Corning |

Optical Specifications

| | |
|--------------------|---|
| Bandwidth | 500 at 850 nm / 500 at 1300 nm |
| Attenuation | 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 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 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) |
| Chromatic Dispersion | Zero Dispersion Wavelength (λ_0): 1300 nm $\leq \lambda_0 \leq$ 1320 nm Zero Dispersion Slope (S0): \leq 0.101 ps/(nm ² *km) |

| Art.-No. | Description |
|------------------|---|
| L-SC/-09Sxxxxx | tde - FO Cable Pigtail SC PC 9/125 μ OS2 Simplex LSOH Length: xxxxx |
| L-SC/-50S3-xxxxx | tde - FO Cable Pigtail SC 50/125 μ OM3 Simplex LSOH Length: xxxxx |
| L-SC/-50S4-xxxxx | tde - FO Cable Pigtail SC 50/125 μ OM4 Simplex LSOH Length: xxxxx |
| L-SC/-50Sxxxxx | tde - FO Cable Pigtail SC 50/125 μ OM2 Simplex LSOH Length: xxxxx |
| L-SC/-62Sxxxxx | tde - FO Cable Pigtail SC 62,5/125 μ OM1 Simplex LSOH Length: xxxxx |
| L-SC9/-09Sxxxxx | tde - FO Cable Pigtail SC APC 9° 9/125 μ OS2 Simplex LSOH Length: xxxxx |

**tde - FO Cable Pigtail SC 50/125 μ OM2 Simplex
LSOH Length: xxxxx**



| Art.-No. | Description |
|-----------------|--|
| L-SCA/-09Sxxxxx | tde - FO Cable Pigtail SC APC 9/125 μ OS2 Simplex LSOH Length: xxxxx |