

Fibre Optic Distribution Cable MM, OM5, Indoor/Outdoor, Loose Tube, LSOH Dca-s2,d1,a1

molex

Molex LSOH OM5 50/125µm central loose tube fibre cable can be used for LAN and WAN applications. The cable is suitable for indoor applications on trays and outdoors in ducts. The cable features a high tensile strength is water-blocked and contains glass yarn strength members and a UV stabilised, LSOH EuroClass Dca-s2,d1,a1 sheath.

To meet the rapid growth of bandwidth demand, OM5 multimode fibre extends the high-bandwidth operating wavelengths from a narrow band centred at 850 nm, to a 100 nm spectrum from 850 nm to 950 nm. OM5 enhances the capabilities of wavelength division multiplexing technology operating at 40 Gb/s and 100Gb/s over a single pair of fibres and paving the way for 400G using four fibre pairs.



PHYSICAL PROPERTIES IEC 60794-1-21/22

Specifications

REFERENCE INFORMATION

Commercial Standards:

Fiber:

IEC 60793-2-10: type A1a.4

TIA/EIA-492 AAAE

ITU G.651.1

ISO/IEC 11801 category OM5

ANSI/TIA/EIA-568.C

ISO/IEC 24764

Cable:

ISO 11801-1, EN 187 000, IEC 60794-2,

EN 50 173-1, IEC 60794-2-20

RoHS Compliant

Fire Propagation Tests

EU Regulation 305/2011 (CPR)

EN 50575:2014+A:2016

EuroClass: Dca-s2,d1,a1

DoP No: MLXCES-2018-F-058

located on web

<https://www.molexces.com/about-us/dop-certificates/>

ELECTRICAL

Cable Attenuation IEC 60793-1-40

Maximum value of cable attenuation at 850 nm:
≤ 3.0 dB/km

Maximum value of cable attenuation at 953 nm:
≤ 2.3 dB/km

Maximum value of cable attenuation at 1300 nm:
≤ 1.0 dB/km

Bare Fiber Attenuation limit to IEC 60793-1-40,

850 nm: ≤ 2.5 dB/km

953 nm: ≤ 1.8 dB/km

1300 nm: ≤ 0.7 dB/km

Bandwidth IEC 60793-1-41

Overfilled (OFL) modal bandwidth at 850 nm:
≥ 3500 MHz/km

Overfilled (OFL) modal bandwidth at 953 nm:
≥ 1850 MHz/km

Overfilled (OFL) modal bandwidth at 1300 nm:
≥ 500 MHz/km

Group index of refraction IEC 60793-1-22

Group index of refraction at 850 nm: 1.482

Group index of refraction at 1300 nm: 1.477

Mechanical Characteristics

Fibre: ø2.8 mm gel-filled Loose tube with 2 – 16 fibres;
ø3.5 mm loose tube with 24 fibres

Strength member: Water-blocked E-Glass fibre elements

Water blocking: Swellable thread

Sheath: 1.5 mm LSOH, UV stabilized flame retardant, IEC 50290-2-27

Sheath Colour: Lime Green

Core diameter: 50 ± 2.5µm

Core non-circularity: ≤ 5 %

Core-cladding concentricity error: ≤ 1µm

Cladding diameter: 125.0 ± 1.0 µm

Cladding non-circularity: ≤ 0.7 %

Coating diameter uncoloured: 242 ± 7 µm

Coating diameter coloured: 250 ± 15 µm

Coating non-circularity: ≤ 5 %

Coating-cladding concentricity error: ≤ 10 µm

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| ATTRIBUTE | METHOD | LIMITS |
|------------------------------------|--------|-------------------------------------------------------------------------------------------------------------|
| Nominal Outer Diameter | N/A | 2-16 Fibres: 7.5mm, 24 fibres: 8.0mm |
| Nominal Weight | N/A | 2-16 fibres: 55kg/km, 24 fibres: 60kg/km |
| Max. installation tensile strength | E1 | 1500N |
| Permanent tensile strength | E1 | 700N |
| Compressive strength | E3 | 2000N/100mm |
| Torsion | E7 | 5 cycles \pm 1 turn |
| Min. bend radius loaded | E11 | R = 100mm |
| Temperature Range | F1 | Storage: -40°C to +60°C (short term upto 70°C) Installation: -15°C to +40°C Operation: -30°C to +70°C |
| Impact | E4 | 20 Nm (no attenuation change, no broken cable elements) |
| Minimum Bending Radius unloaded | E11 | 60mm |
| Minimum Bending Radius loaded | - | 100mm |
| Water penetration | F5B | No water on free end |
| Heat of Combustion | - | 2 – 16 fibres: 1100 MJ/km = 0,31 kWh/m 24 fibres: 1300 MJ/km = 0,36 kWh/m |

Ordering Information

| Order No. | SAP No. | Description |
|-----------|-----------|------------------------------------------------------------|
| CFR-00702 | 183150070 | Fibre Optic Cable OM5 50/125µm MM LT LSOH Dca-s2,d1,a1 4F |
| CFR-00703 | 183150071 | Fibre Optic Cable OM5 50/125µm MM LT LSOH Dca-s2,d1,a1 6F |
| CFR-00704 | 183150072 | Fibre Optic Cable OM5 50/125µm MM LT LSOH Dca-s2,d1,a1 8F |
| CFR-00705 | 183150073 | Fibre Optic Cable OM5 50/125µm MM LT LSOH Dca-s2,d1,a1 12F |
| CFR-00706 | 183150074 | Fibre Optic Cable OM5 50/125µm MM LT LSOH Dca-s2,d1,a1 24F |

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