

Features and Benefits

Molex Premise Networks enhanced Single Mode fibre provides improved performance across the entire 1260nm to 1625nm wavelength spectrum due to its low attenuation in the 1383nm water peak region.

The cable can be used for many indoor and outdoor applications, LAN and WAN backbones, central office interconnections and data centres. Suitable for installations in ducts and trays, the cable offers a UV stabilised LSOH sheath.

Commerical Standards

EN 187 000
IEC 60794-2
IEC 60794-2-20
ISO 11801 2nd Edition
EN 50 173-1
IEC 60793-2-50 Category B.1.3
EN 60793-2-50: Class B1.3
ITU Recommendation G.652.D - the older ITU designations A, B and C are also fulfilled
EN 50173-1:2007, cat OS2; also OS1 requirements are fulfilled
ISO/IEC 11801:2002, cat. OS1
ISO/IEC 24702:2006, cat. OS2; also OS1 requirements are fulfilled
IEEE 802.3-2002 incl. 802.3ae

Fire Propagation Tests

IEC 60332-1-2 Single vertical wire test
IEC 60754-1 No halogens
IEC 60754-2 No acid matters
IEC 61034-2 No dense smoke

Technical Information

Mechanical Characteristics

2 – 24 tightly buffered fibres 900µm
+/- 50µm
Strength member: E-Glass rovings
Sheath: LSOH UV stabilised
(EN50290-2-27)

Electrical/Optical Characteristics

1310 nm - 1625 nm: ≤ 0.39dB/km
1550 nm: ≤ 0.25dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths:
Maximum 0.1dB/km

Group Index of refraction
Group index of refraction at 1310nm: 1.467
Group index of refraction at 1550nm: 1.468
Group index of refraction at 1625nm: 1.468



Physical Properties

Property	Test method	Value
Permanent tensile strength	E11	2, 4, 6, 8 and 12 fibres 500 N
		16 fibres 1000 N
		24 fibres 1500 N
Short term tensile strength (some days)	E11	2, 4, 6, 8 and 12 fibres 1000 N
		16 fibres 1400 N
		24 fibres 1600 N
Maximum installation load (a few hours)	-	2, 4, 6, 8 and 12 fibres 1500 N
		16 fibres 2100 N
		24 fibres 2400 N
Impact	E4	20 J
Crush (compressive strength)	E3	3000 N/ 100 mm
Torsion	E7	5 cycles ± 1 turn
Temperature range	F1	Operation and Installation -20°C to 70°C
		Storage -40°C to 70°C

MOLEX PREMISE NETWORKS

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www.molexpn.com

EMEA
Tel: 44 (0)2392 205800
www.molexpn.co.uk

APAC
Tel: 61 3 9971 7111
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Technical Information
Other Properties

Attribute	Measurement Method	Units	Limits
Cladding diameter	IEC/EN 60793-1-20	µm	125.0 ± 0.7
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core (MFD) non-circularity	IEC/EN 60793-1-20	%	≤ 6
Core (MDF) - cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 0.5
Primary coating diameter - uncoloured	IEC/EN 60793-1-21	µm	242 ± 7
Primary coating diameter - coloured	IEC/EN 60793-1-21	µm	250 ± 15
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 5
Primary coating cladding concentricity error	IEC/EN 60793-1-21	µm	≤ 12.0
Proof stress level	IEC/EN 60793-1-30	GPa	≥ 0.7 (≈ 1 %)
Strip force (peak)	IEC/EN 60793-1-32	N	1.0 ≤ F _{peak, strip} ≤ 8.9
Chromatic dispersion coefficient: In the interval 1285nm - 1330nm At 1550nm At 1625nm	IEC/EN 60793-1-42	ps/km • nm ps/km • nm ps/km • nm	≤ 3 ≤ 18.0 ≤ 22.0
Zero dispersion wavelenth, λ ₀		nm	1311 ± 11
Zero dispersion slope		ps/(nm ² • km)	≤ 0.090
Cut-off wavelength	IEC/EN 60793-1-44	λ _c nm λ _{cc} nm	1034 - 1330 ≤ 1260
Mode field diameter at 1310 nm Mode field diameter at 1550 nm	IEC/EN 60793-1-45	µm µm	9.0 ± 0.4 10.1 ± 0.5
Macrobending loss at 1550 nm, 100 turns on a ø 60 mm mandrel.	IEC/EN 60793-1-47	dB	≤ 0.05
Polarisation mode dispersion (PMD) coefficient, cabled	IEC/EN 60793-1-48	ps/√km	≤ 0.5
PMDQ Link Design Value	IEC/EN 60794-3	ps/√km	≤ 0.2

ORDERING INFORMATION

Order No.	SAP No.	Description
CFR-00386	Consult Molex	Internal Distribution Grade, 2 Core, TB, 9/125µm OS2
CFR-00387	Consult Molex	Internal Distribution Grade, 4 Core, TB, 9/125µm OS2
CFR-00388	Consult Molex	Internal Distribution Grade, 6 Core, TB, 9/125µm OS2
CFR-00389	Consult Molex	Internal Distribution Grade, 8 Core, TB, 9/125µm OS2
CFR-00390	Consult Molex	Internal Distribution Grade, 12 Core, TB, 9/125µm OS2
CFR-00391	Consult Molex	Internal Distribution Grade, 16 Core, TB, 9/125µm OS2
CFR-00392	Consult Molex	Internal Distribution Grade, 24 Core, TB, 9/125µm OS2

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