

### Features and Benefits

Molex Fibre cable is suitable for LAN and WAN backbones and may be installed in ducts and trays. The cable features a UV stabilised, water and moisture resistance sheathing suitable for shorter outdoor runs. The cable has a fire test rating of IEC 60332-3-24. Available in OM2, OM3, OM4 and OS2 variants.

### Commercial Standards

#### Cable

ISO 11801 2nd edition, EN 187 000, IEC 60794-2, EN 50 173-1, IEC 60794-2-20

#### Fibre

IEC 60793-2-50 Category B.1.3  
 ISO/IEC 11801:2002, cat. OS1  
 EN 60793-2-50: Class B1.3  
 ISO/IEC 24702: 2006, cat. OS2; also OS1 requirements are fulfilled  
 ITU Recommendation G.652.D – the older ITU designations A, B and C are also fulfilled  
 IEEE 802.3 – 2002 incl. 802.3ae  
 EN 50173-1:2007, cat. OS2; also OS1 requirements are fulfilled  
 IEC 60793-2-10 Category A1a.1  
 EN 50173-1:2007 category OM2  
 EN 60793-2-10: type A1a.1  
 ISO/IEC 11801:2002 category OM2.  
 TIA/EIA-492 AAAB  
 IEEE 802.3 - 2002. with amendment 802.3ae - 2002.  
 ANSI/TIA/EIA-568.B.3 - 2000  
 IEC 60793-2-10 Category A1a.2  
 EN 50 173:2007 category OM3  
 EN 60793-2-10: type A1a.2  
 ISO/IEC 11801:2002 category OM3  
 IEEE 802.3 - 2002 incl. amendment 802.3ae - 2002.  
 TIA/EIA-492 AAAC  
 IEC 60793-2-10: type A1a.3  
 (in development)  
 EN 50173-1:2007. Amendment AB category OM4  
 EN 60793-2-10: type A1a.3  
 (in development)  
 ISO/IEC 11801:2002. Amendment 2 category OM4  
 TIA/EIA-492 AAAD  
 IEEE 802.3-2002 incl. amendment 802.3ae-2002

### Fire Propagation Tests

LSHF-FR (FRNC): IEC 60332-3-24, IEC 60754-2, IEC 61034

### Technical Information

#### Mechanical Characteristics

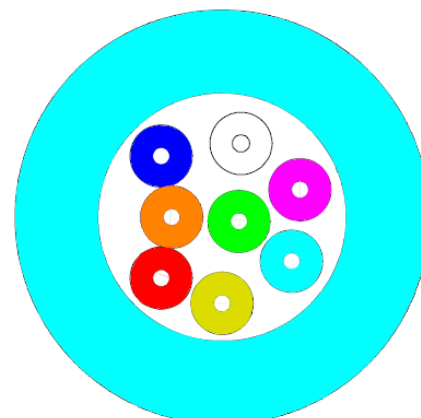
Fibre: 2-24 tightly buffered fibres 900µm ± 50µm

#### Colour code

1	Red	13	Yellow w/mark every 70mm
2	Green	14	White w/mark every 70mm
3	Blue	15	Grey w/mark every 70mm
4	Yellow	16	Turquoise w/mark every 70mm
5	White	17	Pink w/mark every 70mm
6	Grey	18	Orange w/mark every 70mm
7	Brown	19	Yellow w/mark every 35mm
8	Violet	20	White w/mark every 35mm
9	Turquoise	21	Grey w/mark every 35mm
10	Black	22	Turquoise w/mark every 35mm
11	Orange	23	Orange w/mark every 35mm
12	Pink	24	Pink w/mark every 35mm

Strength member: Ultra high modulus aramid yarns

Sheath: Halogen free, flame resistant thermoplastic sheathing compound



#### PHYSICAL PROPERTIES IEC60974-1-2

Attribute	Method	Limits							
Fibre Count		2	4	6	8	12	16	24	
Nominal Diameter (mm)	-	4.5	5	5.5	6	6.5	7	8	
Nominal Weight (Kg/km)	-	21	26	30	35	45	50	65	
Maximum Installation Load (a few hours) N	-	1000	1000	1000	1000	1200	1200	1500	
Short Term Tensile Strength (some days) N	E1	560	560	560	560	680	680	800	
Permanent Tensile Strength (N)	E1	280	280	280	280	340	340	400	
Impact (J)	E4	20J							
Crush (compressive strength)	E3	3000 N/ 100mm							
Torsion	E7	5 cycles ± 1 turn							
Minimum Bending Radius	E11	50	50	50	50	75	75	115	
Minimum Bending Radius Under Tension	E18A	100	100	100	100	130	130	230	
Temperature Range	F1	Operation and Installation: -20°C to 70°C Storage: -40°C to 70°C							
Minimum Bending Radius of the 900µm	G01	With standard fibres: 20mm With MaxCap-BB-OMx fibres: 7.5mm With BendBright-XS fibres: 7.5mm							
Heat of Combustion (MJ/km)-(kW/m)		370 0.10	475 0.13	575 0.16	660 0.18	900 0.25	1000 0.28	1400 0.39	

### MOLEX PREMISE NETWORKS

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### Technical Information

#### Electrical/Optical Characteristics

##### OS2

Attenuation of cable with fibres

(IEC 60793-1-40)

1310nm-1625nm:  $\leq 0.39$  dB/km

1550nm:  $\leq 0.25$  dB/km

Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths:

Maximum 0.1 dB/km

Group index of refraction (IEC 60793-1-22)

At 1310 nm: 1.467

At 1550 nm: 1.468

At 1625 nm: 1.468

##### OM2

Attenuation of cable with fibres

(IEC 60793-1-40)

Maximum at 850 nm:  $\leq 2.7$  dB/km

Maximum at 1300 nm:  $\leq 0.8$  dB/km

Typical value at 850 nm:  $\leq 2.5$  dB/km

Typical value at 1300 nm:  $\leq 0.6$  dB/km

Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths:

Maximum 0.1 dB/km

Fibre bending loss R=7.5mm

850/1300nm:  $\leq 0.2$ dB/  $\leq 0.5$ dB

Fibre bending loss R=15mm

850/1300nm:  $\leq 0.1$ dB/  $\leq 0.3$ dB

Bandwidth (IEC 60793-1-41)

At 850 nm:  $\geq 500$  MHz • km

At 1300 nm:  $\geq 500$  MHz • km

Group index of refraction (IEC 60793-1-22)

At 850 nm: 1.482

At 1300 nm: 1.477

##### OM3

Attenuation of cable with fibres

(IEC 60793-1-40)

Maximum at 850 nm:  $\leq 3.0$  dB/km

Maximum at 1300 nm:  $\leq 1.0$  dB/km

Typical value at 850 nm:  $\leq 2.5$  dB/km

Typical value at 1300 nm:  $\leq 0.8$  dB/km

Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths:

Maximum 0.1 dB/km

Fibre bending loss R=7.5mm

850/1300nm:  $\leq 0.2$ dB/  $\leq 0.5$ dB

Fibre bending loss R=15mm

850/1300nm:  $\leq 0.1$ dB/  $\leq 0.3$ dB

Bandwidth (IEC 60793-1-41)

At 850 nm:  $\geq 1500$  MHz • km

At 1300 nm:  $\geq 500$  MHz • km

Effective Modal Bandwidth (EMB)  
at 850nm (assured by means of differential  
mode delay (DMD) measurement as specified in IEC  
60793-1-49):  $\geq 2000$  MHz • km

Group index of refraction (IEC 60793-1-22)

At 850 nm: 1.482

At 1300 nm: 1.477

##### OM4

Attenuation of cable with fibres

(IEC 60793-1-40)

Maximum at 850 nm:  $\leq 3.0$  dB/km

Maximum at 1300 nm:  $\leq 1.0$  dB/km

Typical value at 850 nm:  $\leq 2.5$  dB/km

Typical value at 1300 nm:  $\leq 0.8$  dB/km

Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths:

Maximum 0.1 dB/km

Fibre bending loss R=7.5mm

850/1300nm:  $\leq 0.2$ dB/  $\leq 0.5$ dB

Fibre bending loss R=15mm

850/1300nm:  $\leq 0.1$ dB/  $\leq 0.3$ dB

Bandwidth (IEC 60793-1-41)

At 850 nm:  $\geq 3500$  MHz • km

At 1300 nm:  $\geq 500$  MHz • km

Effective Modal Bandwidth (EMB)  
at 850nm (assured by means of differential  
mode delay (DMD) measurement as specified in IEC  
60793-1-49):  $\geq 4700$  MHz • km

Group index of refraction (IEC 60793-1-22)

At 850 nm: 1.482

At 1300 nm: 1.477

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<b>Order No.</b>	<b>SAP No.</b>	<b>Description</b>
CFR-00490	Consult Molex	Fibre Optic Cable, Tight Buffered, 4 Core, LS0H IEC60332-3, 50/125 OM2
CFR-00424	Consult Molex	Fibre Optic Cable, Tight Buffered, 6 Core, LS0H IEC60332-3, 50/125 OM2
CFR-00491	Consult Molex	Fibre Optic Cable, Tight Buffered, 8 Core, LS0H IEC60332-3, 50/125 OM2
CFR-00420	Consult Molex	Fibre Optic Cable, Tight Buffered, 12 Core, LS0H IEC60332-3, 50/125 OM2
CFR-00492	Consult Molex	Fibre Optic Cable, Tight Buffered, 24 Core, LS0H IEC60332-3, 50/125 OM2
CFR-00493	Consult Molex	Fibre Optic Cable, Tight Buffered, 4 Core, LS0H IEC60332-3, 50/125 OM3
CFR-00494	Consult Molex	Fibre Optic Cable, Tight Buffered, 6 Core, LS0H IEC60332-3, 50/125 OM3
CFR-00495	Consult Molex	Fibre Optic Cable, Tight Buffered, 8 Core, LS0H IEC60332-3, 50/125 OM3
CFR-00496	Consult Molex	Fibre Optic Cable, Tight Buffered, 12 Core, LS0H IEC60332-3, 50/125 OM3
CFR-00497	Consult Molex	Fibre Optic Cable, Tight Buffered, 24 Core, LS0H IEC60332-3, 50/125 OM3
CFR-00622	Consult Molex	Fibre Optic Cable, Tight Buffered, 4 Core, LS0H IEC60332-3, 50/125 OM4
CFR-00623	Consult Molex	Fibre Optic Cable, Tight Buffered, 6 Core, LS0H IEC60332-3, 50/125 OM4
CFR-00624	Consult Molex	Fibre Optic Cable, Tight Buffered, 8 Core, LS0H IEC60332-3, 50/125 OM4
CFR-00625	Consult Molex	Fibre Optic Cable, Tight Buffered, 12 Core, LS0H IEC60332-3, 50/125 OM4
CFR-00626	Consult Molex	Fibre Optic Cable, Tight Buffered, 24 Core, LS0H IEC60332-3, 50/125 OM4
CFR-00498	Consult Molex	Fibre Optic Cable, Tight Buffered, 4 Core, LS0H IEC60332-3, 9/125 OS2
CFR-00499	Consult Molex	Fibre Optic Cable, Tight Buffered, 6 Core, LS0H IEC60332-3, 9/125 OS2
CFR-00500	Consult Molex	Fibre Optic Cable, Tight Buffered, 8 Core, LS0H IEC60332-3, 9/125 OS2
CFR-00501	Consult Molex	Fibre Optic Cable, Tight Buffered, 12 Core, LS0H IEC60332-3, 9/125 OS2
CFR-00502	Consult Molex	Fibre Optic Cable, Tight Buffered, 24 Core, LS0H IEC60332-3, 9/125 OS2

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