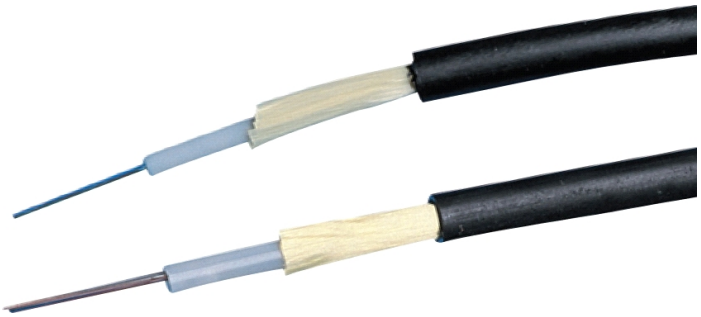
Excel Loose Tube Internal/External Grade Fibre - Multimode OM1 (05/2012)



- Internal External Grade
- Sequentially Metre Marked
- 25 Year System Warranty

Features

- Internal External Grade
- 62.5/125µm Multimode Fibre
- 200/600MHz.km Bandwidth
- Cut to length service
- Sequentially Metre Marked
- LSOH Black Sheath
- Duct Grade - Rodent Resistant
- 25 Year System Warranty

Product Overview

Excel loose tube optical fibre cables have been designed specifically for internal and external applications. These compact, lightweight cables are extremely flexible and are quick and easy to install. The cables are constructed around a gel filled (non-dripping and silicon free) tube containing up to 24 colour coded 250µm primary coated 62.5/125µm fibres. This tube is covered with swellable (for the longitudinal watertightness) yarns as strength members. The outer jacket is Flame Retardant, Low Smoke Zero Halogen.

Cores Colours

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

Physical Properties

Property	Test method	Value
Permanent tensile strength	IEC 60794-1 E1	500 N (no attenuation change, fibre strain less than ¼ of proof test level)
Short term tensile strength	IEC 60794-1 E1	750 N (fibre strain less than ⅓ of proof test level)
Maximum installation tensile strength	IEC 60794-1 E1	1000 N (fibre strain less than ½ of proof test level)
Impact	IEC 60794-1 E4	15 Nm (no attenuation change, no broken cable elements)
Crush (compressive strength)	IEC 60794-1 E3	1500 N
Torsion	IEC 60794-1 E7	5 cycles ± 1 turn
Kink	IEC 60794-1 E10	The cables do not form a kink when a loop is drawn together to a diameter of 100 mm
Temperature range	IEC 60794-1 F1	Operation -30°C to +60°C Installation -30°C to +60°C Storage -40°C to +60°C
Water penetration	IEC 60794-1 F5B	No water on free end

Property	4-16 Cores	24 Core
Heat of combustion	630 MJ/km 0.18 KWh/m	800 MJ/km 0.22 KWh/m
Nominal diameter	6.0 mm	6.5 mm
Nominal cable weight	40 kg/km	45 kg/km
Minimum bend radius		
Unloaded (IEC 60794-1 E11)	60 mm	
Loaded	100 mm	

Property		
Loose Tube	Ø 2.8 mm Jelly filled loose tube (≤ 16 fibres) Ø 3.5 mm Jelly filled loose tube (24 fibre	
Strength member	Waterblocked E-Glass rovings	
Jacket	1.1 mm black, Halogen free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilised	
Fire rating	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

Performance Properties

Cable attenuation	IEC 60793-1-40
Maximum attenuation value of cable at 850 nm	≤ 3.2 dB/km
Maximum attenuation value of cable at 1300 nm	≤ 1.0 dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths	Max. 0.2 dB/km

Bandwidth	IEC 60793-1-41
Overfilled (OFL) modal bandwith at 850 nm	200 MHz.km
Overfilled (OFL) modal bandwith at 1300 nm	600 MHz.km

Standards and Norms	
IEC 60793-2-10 Category A1b	EN 50173-1 category OM1
IBM™ Fibre Optic Channel Links; ESCON™	ISO / IEC 11801 category OM1
IEEE 802.3	TIA / EIA-492 AAAA
EN 60793-2-10: type A1b	ANSI / TIA / EIA-568-B.3

Property	Standard	Value
Core diameter	IEC / EN 60793-1-20	62.5 ± 2.5 µm
Core non-circularity	IEC / EN 60793-1-20	≤ 5 %
Cladding diameter	IEC / EN 60793-1-20	125.0 ± 1.0 µm
Cladding non-circularity	IEC / EN 60793-1-20	≤ 5 %
Core - cladding concentricity error	IEC / EN 60793-1-20	≤ 1.5 µm
Primary coating diameter - uncoloured	IEC / EN 60793-1-21	242 ± 7 µm
Primary coating diameter - coloured	IEC / EN 60793-1-21	250 ± 15 µm
Primary coating non-circularity	IEC / EN 60793-1-21	≤ 5 %
Primary coating - cladding concentricity error	IEC / EN 60793-1-21	≤ 10 µm
Group index of refraction:	IEC / EN 60793-1-22	
at 850 nm		1.496
at 1300 nm		1.491
Proof stress level	IEC / EN 60793-1-30	≥ 0.7 (≈ 1 % strain) Gpa
Typical average stripforce	IEC / EN 60793-1-32	1.7 N
Strip force (peak)	IEC / EN 60793-1-32	$1.3 \leq F_{peak.strip} \leq 8.9$ N
Numerical aperture	IEC / EN 60793-1-43	0.275 ± 0.015

Typical Applications

- 100BASE-FX
- 1000BASE-SX
- 1000BASE-LX
- FDDI
- 155 Mbps ATM
- 622 Mbps ATM
- 531 Mbps Fibre Channel
- 1062 Mbps Fibre Channel

Part Number Information

Part No.	Description
200-047	Internal/External Grade Loose Tube Fibre Cable 4 Core 62.5/125 OM1
200-060	Internal/External Grade Loose Tube Fibre Cable 6 Core 62.5/125 OM1
200-067	Internal/External Grade Loose Tube Fibre Cable 8 Core 62.5/125 OM1
200-087	Internal/External Grade Loose Tube Fibre Cable 12 Core 62.5/125 OM1
200-081	Internal/External Grade Loose Tube Fibre Cable 16 Core 62.5/125 OM1
200-084	Internal/External Grade Loose Tube Fibre Cable 24 Core 62.5/125 OM1

System Warranty

The Excel System Warranty provides a 25-year product and applications assurance of compliance with the industry performance standard appropriate to the class of cabling installed. The warranty may be applied for by an accredited Excel Partner who has designed, supplied and installed the said system.

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