

X 25 Year System Warranty

X Internal External Grade

X Sequentially Metre Marked

X Bend insensitive fibre core

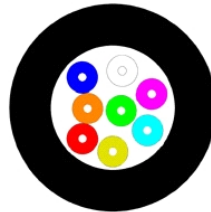
X CPR compliant to Cca

### Features

- 25 Year System Warranty
- Sequentially Metre Marked
- LSOH Black Sheath
- Bend insensitive fibre core
- Internal External Grade
- 50/125 Multimode Fibre
- 500 MHz.km Bandwidth
- Cut to length service
- CPR compliant to Cca

### Product Overview

Enbeam tight buffered optical fibre cables have been designed specifically for internal and external applications. With the new bend insensitive core construction these compact, lightweight cables are extremely flexible and quick and easy to install. The cables are constructed around swellable reinforced yarns as common strength containing up to 24 colour coded 900µm tight buffered 50/125µm fibres, covered with a flame retardant, low smoke zero halogen, outer sheath. The print legend on the cable now also includes information regarding the DOP Number, Test and classification of the cable for traceability.



### Performance Overview

Enbeam OM2 multimode cables are made of a high grade bend-insensitive graded-index fibre. Transmission speeds of 10/Mb/s, 100Mb/s , 1 Gb/s and 10 Gb/s are supported and the fibre is compatible with all types of OM2 optical fibre. It has a 50 µm core with 125 µm cladding diameter.

### Cores Colours

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

## Physical Properties

Property	Test method	Value	
Permanent tensile strength	IEC 60794-1-2 E11	4, 6, 8 & 12 cores	500 N
		16 cores	1000 N
		24 cores	1500 N
Short term tensile strength	IEC 60794-1-2 E11	4, 6, 8 & 12 cores	1000 N
		16 cores	1400 N
		24 cores	1600 N
Maximum installation load		4, 6, 8 & 12 cores	1500 N
		16 cores	2100 N
		24 cores	2400 N
Impact	IEC 60794-1-2 E4	20 J	
Crush (compressive strength)	IEC 60794-1-2 E3	3000 N / 100 mm	
Torsion	IEC 60794-1-2 E7	5 cycles ± 1 turn	
Temperature range	IEC 60794-1-2 F1	Operation & installation	-20°C to +70°C
		Storage	-40°C to +70°C

Property	4 Core	6 Core	8 Core	12 Core	16 Core	24 Core
Nominal diameter	6.5 mm	6.6 mm	7.0 mm	7.0 mm	8.0 mm	8.5 mm
Nominal cable weight	34 kg/km	36 kg/km	39 kg/km	43 kg/km	52 kg/km	63 kg/km
Minimum bend radius			20 times OD			
	During Installation					
			10 times OD			

Property	
Fibre	Tight buffered fibres 900 µm ± 50 µm
Strength member	E-Glass rovings
Jacket	1.1 mm black, Halogen free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilised
Standard of flame retardancy	IEC 60332-1-[1,2] (2004-07), IEC 60754-(1,2)
CPR Euroclass	EN 50575:2014 +A1:2016 Cca s1b,d1,a1

## Performance Properties

Cable attenuation	IEC 60793-1-40
Maximum attenuation value of cable at 850 nm	≤ 2.7 dB/km
Maximum attenuation value of cable at 1300 nm	≤ 0.8 dB/km
Typical value at 850 nm	≤ 2.5 dB/km
Typical value at 1300 nm	≤ 0.6 dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths	Max. 0.1 dB/km
Fibre bending loss R=7.5 mm 850/1300 nm	≤ 0.2 dB / ≤ 0.5 dB
Fibre bending loss R=15 mm 850/1300 nm	≤ 0.1 dB / ≤ 0.3 dB

Bandwidth	IEC 60793-1-41
Overfilled (OFL) modal bandwidth at 850 nm	≥ 500 MHz.km
Overfilled (OFL) modal bandwidth at 1300 nm	≥ 500 MHz.km

Standards and Norms	
IEC 60793-2-10: type A1a.1	EN 50173-1 category OM2.
ITU G.651.1	ISO / IEC 11801 category OM2
IEEE 802.3	TIA / EIA-492 AAAB
EN 60793-2-10: type A1a.1	ANSI / TIA / EIA-568-C, ANSI/TIA/EIA-598

Property	Standard	Value
Core diameter	IEC / EN 60793-1-20	50.0 ± 1.0 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	≤ 0.7 %

Core - cladding concentricity error	IEC / EN 60793-1-20	≤ 1.0 μm
Primary coating diameter - uncoloured	IEC / EN 60793-1-21	242 ± 5 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	≤ 6 μm
Group index of refraction:	IEC / EN 60793-1-22	
at 850 nm		1.482
at 1300 nm		1.477
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 ≤ F <sub>peak.strip</sub> ≤ 8.9 N
Numerical aperture	IEC / EN 60793-1-43	0.200 ± 0.015

### Typical Applications

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

### Part Number Information

Part No.	Description
200-115	Enbeam Internal/External Grade Tight Buffered Fibre Cable 4 Core 50/125 OM2
200-117	Enbeam Internal/External Grade Tight Buffered Fibre Cable 6 Core 50/125 OM2
200-135	Enbeam Internal/External Grade Tight Buffered Fibre Cable 8 Core 50/125 OM2
200-145	Enbeam Internal/External Grade Tight Buffered Fibre Cable 12 Core 50/125 OM2
200-147	Enbeam Internal/External Grade Tight Buffered Fibre Cable 24 Core 50/125 OM2

### 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.



Excel is a world-class premium performing end-to-end infrastructure solution - designed, manufactured, supported and delivered - without compromise.

Contact us at [sales@excel-networking.com](mailto:sales@excel-networking.com)

