Excel Enbeam OS2 Fibre Optic Cable Loose Tube 48 Core Eca Black

Item Code: 205-310

- Water resistant & UV resistant
- Duct grade - rodent resistant
- Sequentially metre marked
- Cut to length service
- Euroclass Eca
- 25 Year system warranty
- CIBSE TM65 Embodied Carbon: 0.975 kg CO2e

Product Overview

Enbeam OS2 Singlemode Fibre Optic Cable Loose Tube 48 Core 9/125 Copolymer Eca Black, part of a huge range of OS2 fibre optic cables fully stocked at Mayflex.
Excel OS2 9/125 µm loose tube optical fibre cables have been designed specifically for internal and external applications.

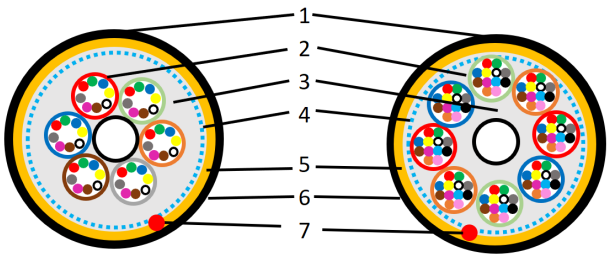
The singlemode fibre is G.652.D compliant low water peak grade. A layer of water blocking tape provides interstitial water blocking. The cables are constructed around multiple gel filled (non-dripping and silicon free) tubes containing up to 12 colour coded 250 µm primary coated fibres.

Product Specifications

Feature	Values
Number of Cores	48
Type of tube	Loose tube
Number of fibres per tube	12
Fibre type	Single mode 9/125
Category	OS2
Rodent resistant	yes
Outer sheath material	Copolymer, thermoplastic (LS0H)

Outer sheath colour	Black
Flame retardant according to IEC 60332-1-2	yes
Reaction-to-fire class according to EN 13501-6	Eca
Outer diameter approx.	11 mm

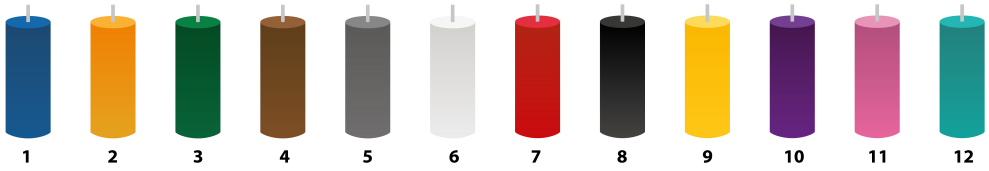
Cross-section diagram



48 core 96 core

1 Central strength member
2 Loose tube
3 Flooding Gel
4 Polyester tape & binder
5 Glass roving yarns
6 LSOH Outer sheath
7 Ripcord

Colour coding (as per TIA-598-C)



For fibre core counts above 12 the colour sequence is repeated with the addition of a mark every 70mm for cores 13-24 and two marks for 25-36 and so on.

Cable specifications

Features	Values	48 Core	96 Core
Fibre Colour Code Standard	TIA 598		
Tensile Strength (during installation)	4000N		
Tensile strength (installed)	2000N		
Torsion	± 180 ⁰		

Tube inner diameter		1.5mm	1.7mm
Tube outer diameter		2.1mm	2.3mm
Central strength member		2.1 ± 0.1 mm	2.5 ± 0.1 mm
Minimum bend radius (long term)	20 x Diameter		
Minimum bend radius (short term)	10 x Diameter		
Moisture barrier	Flooding gel		
Number of ripcords	2		
Outer sheath diameter	2mm (nominal)		
Strength members	E-Glass Rovings		
Temperature range (installed)	-30°C to +70°C		
Temperature range (operation)	-30°C to +70°C		
Temperature range (storage)	-30°C to +70°C		
Cable weight		135.0 ± 15 kg/km	170 ± 20 kg/km

Fibre specifications

Features		Values
Fibre Type		G.652D (OS2)
Attenuation	at 1310 nm	≤ 0.36 dB/km
	at 1550 nm	≤ 0.23 dB/km
Chromatic Dispersion	1285 - 1330 nm	≤ 3.5 ps/nm.km
	1550 nm	≤ 18 ps/nm.km
Zero Dispersion Wavelength		1300 - 1324 nm
Zero Dispersion Slope		≤ 0.092 ps/nm2.km
Polarisation Mode Dispersion		≤ 0.2 ps/√km
Cut-off Wavelength		≤ 1260 nm
Mode Field Diameter	at 1310 nm	9.3 ± 0.5 µm
Core Cladding Concentricity Error		≤ 0.8 µm
Cladding Diameter		125 ± 1 µm

Cladding Non-circularity	≤ 1 %
Coating Diameter	245 ± 10 µm

Standards

Applicable standard	Subject
IEC 60332-1-2:2004	Tests on electric and optical fibre cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable. Procedure for 1 kW pre-mixed flame
IEC 60754-2:2014+A1:2020	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity
IEC 61034-2:2005+A2:2020	Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements
IEC 60793-1-1:2022	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance
IEC 60793-1-20:2014	Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry
IEC 60793-1-21:2001	Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry
IEC 60793-1-22:2001	Optical fibres - Part 1-22: Measurement methods and test procedures - Length measurement
IEC 60793-1-30:2010	Optical fibres - Part 1-30: Measurement methods and test procedures - Fibre proof test
ITU G.652.D	Characteristics of a single-mode optical fibre and cable
EN 50173-1:2018	Information technology. Generic cabling systems - General requirements
EN 50575: 2014 + A1: 2016	Power, control and communication cables — Cables for general applications in construction works subject to reaction to fire requirements
EN 50399:2011+A1:2016	Common test methods for cables under fire conditions. Heat release and smoke production measurement on cables during flame spread test. Test apparatus, procedures, results
ISO/IEC 11801-1:2017	Information technology - Generic cabling for customer premises: Part 1 General Requirements
ANSI/TIA 568-3.D	Optical Fiber Cabling and Components Standard
ANSI/TIA/EIA 598-D	Optical Fibre Cable Colour Coding

RoHS-II/-III (2011/65/EU & 2015/863): 2023	Our products, demonstrate full adherence to the regulatory stipulations of the EU Directive 2011/65/EU (RoHS-II) and its corresponding delegated directive 2015/863 (RoHS-III).
WFD: 2023	Compliant to Waste Framework Directive
SCIP: 2023	Compliant - Does Not Contain Substances of Concern In articles as such or in complex objects (Products)
POPs (EU) No 2019/1021	EU Regulation for the restriction of Persistent Organic Pollutants.

Part Number Table

Part Number	Description
205-310	Excel Enbeam OS2 Fibre Optic Cable Loose Tube 48 Core Eca Black
205-312	Excel Enbeam OS2 Fibre Optic Cable Loose Tube 96 Core Eca Black