

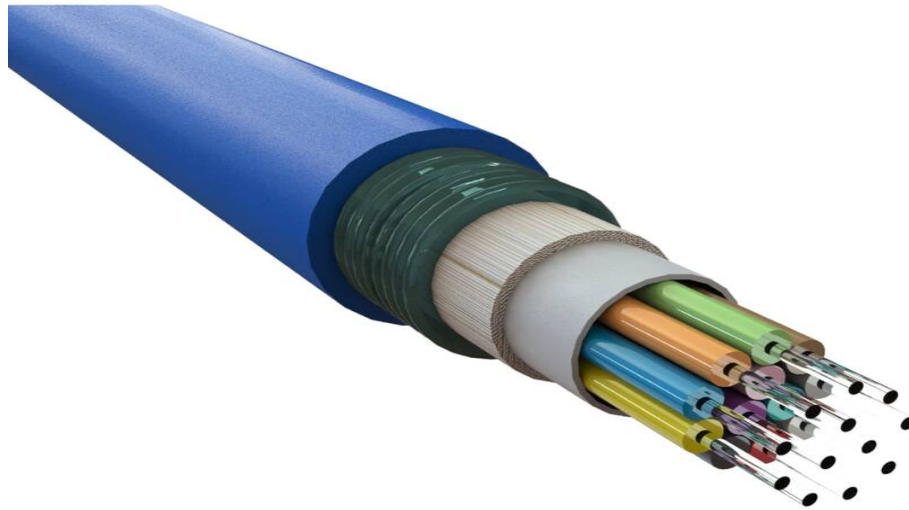
# Excel Enbeam OS2 Armoured CST Fibre Optic Cable Loose Tube 4 Core LSZH Eca Blue

excel  
without compromise.

Part Code: 205-305

sales@excel-networking.com  
excel-networking.com

CIBSE TM65 Embodied Carbon: 0.623 kg CO2e



## Main Features

- / Water resistant & UV resistant
- / Duct grade - Rodent resistant
- / Sequentially metre marked
- / Cut to length service
- / Euroclass Eca
- / 25 Year system warranty

## Product Overview

Enbeam OS2 Singlemode Fibre Optic Cable Loose Tube 4 Core 9/125 LSZH Eca Blue, part of a huge range of OS2 fibre optic cables fully stocked at Mayflex.

Excel corrugated steel tape (CST) OS2 9/125 µm armoured loose tube optical fibre cables have been designed specifically for applications requiring a high degree of mechanical protection.

The singlemode fibre is G.652.D compliant low water peak grade and offers OS2 performance and OS1 backwards compatibility. They are extremely rugged, provide rodent resistance and are quick and easy to install.

The CST cable has also been designed for direct burial, to ensure the correct installation a sand back fill must be used at all times.

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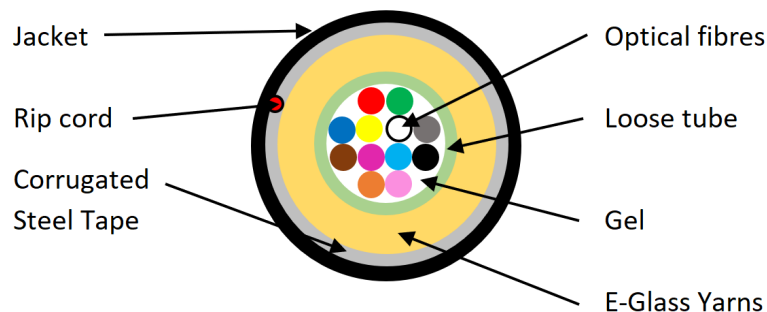
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## Product Specifications

Feature	Values
Number of Cores	4
Type of tube	Loose tube
Number of fibres per tube	4
Fibre type	Single mode 9/125
Category	OS2
Rodent resistant	yes
Outer sheath material	Copolymer, thermoplastic (LSOH)
Outer sheath colour	Blue
Flame retardant according to IEC 60332-1-2	yes
Reaction-to-fire class according to EN 13501-6	Eca
Outer diameter approx.	8.4 mm

### Cross-section diagram

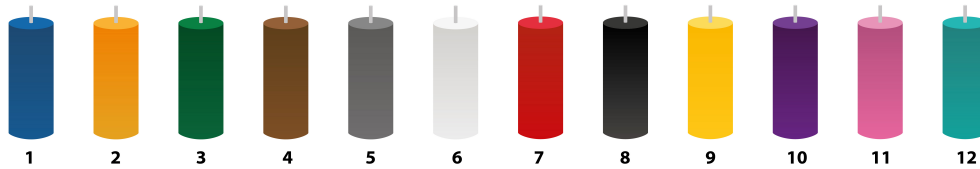


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## Colour coding (as per TIA-598-C)



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
Tensile Strength		2000 N
Crush Resistance		3000 N/m
Torsion		± 180°
Temperature performance	<b>Installation</b>	-30°C to +70°C
	<b>Operation</b>	-30°C to +70°C
	<b>Storage</b>	-30°C to +70°C
Loose tubes	<b>Number</b>	1
	<b>Material</b>	PBT
Loose Tube ID/OD	<b>4-16 Cores</b>	2.0/2.8 ± 0.1 mm
	<b>24 Cores</b>	2.6/3.5 ± 0.1 mm
Peripheral Strength Member		Glass Yarn + WS Yarn
Armoring	<b>Thickness</b>	0.150 mm
	<b>Material</b>	ECCS Tape
Outer Sheath	<b>Thickness</b>	1.8 mm (Nominal)

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	Material	LSZH
Ripcord	Number	1
	Material	Polyester
Overall Cable Diameter	4-16 Cores	8.4 ± 0.5 mm
	24 Cores	9.2 ± 0.5 mm
Cable Weight	4-16 Cores	100.0 ± 10 kg/km
	24 Cores	115 ± 10 kg/km
Bending Radius	Short term	20 x Diameter
	Long term	10 x Diameter

## Fibre specifications

Features		OS2
Attenuation	@1310 nm	≤ 0.36 dB/km
	@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/nm <sup>2</sup> .km
Polarisation Mode Dispersion		≤ 0.2 ps/√km
Cut-off Wavelength		≤ 1260 nm
Mode Field Diameter	@1310 nm	9.2 ± 0.4 μm
Core Cladding Concentricity Error		≤ 0.8 μm
Cladding Diameter		125 ± 1 μm

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Cladding Non-circularity	≤ 1 %
Coating Diameter (Uncoloured)	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

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	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
IEC 60794-1-2/F5	Generic specification – Optical fibre cable test procedures – Bending test (Method F5)
IEC 60794-1-205	Optical fibre cables – Part 1-205: Generic specification – Basic optical cable test procedures – Water penetration test
Directive 2008/98/EC (WFD)	Waste Framework Directive — compliant. Implemented in the UK through the Waste (England and Wales) Regulations 2011 (SI 2011 No. 988).
ECHA SCIP Database	Compliant; product does not contain SVHCs (Substances of Very High Concern) as defined under REACH Article 33(1). Submission obligations met under EU REACH and UK REACH.
Regulation (EU) 2019/1021 (POPs)	EU Regulation on Persistent Organic Pollutants — compliant. For Great Britain, compliance is aligned with the Persistent Organic Pollutants (Amendment) (EU Exit) Regulations 2020 (SI 2020 No. 1355).
Directive 2011/65/EU (RoHS II)	Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment — compliant. Applies within EU member states).
Directive (EU) 2015/863 (RoHS III)	Amending Directive 2011/65/EU to add four phthalates (DEHP, BBP, DBP, DIBP) to Annex II — compliant.
UK SI 2012 No. 3032	The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (UK RoHS) — compliant for Great Britain. Retained EU law, as amended by the Product Safety and Metrology (Amendment etc.) (EU Exit) Regulations 2019.

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## Part Code Table

Part Code	Description
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205-306	Excel Enbeam OS2 Armoured CST Fibre Optic Cable Loose Tube 8 Core LSZH Eca Blue
205-307	Excel Enbeam OS2 Armoured CST Fibre Optic Cable Loose Tube 12 Core LSZH Eca Blue
205-308	Excel Enbeam OS2 Armoured CST Fibre Optic Cable Loose Tube 16 Core LSZH Eca Blue
205-309	Excel Enbeam OS2 Armoured CST Fibre Optic Cable Loose Tube 24 Core LSZH Eca Blue