# Excel Enbeam OS2 Singlemode Armoured CST Fibre Optic Cable Loose Tube 12 Core 9/125 Cca Blue

**Part Code: 275-307**

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CIBSE TM65 Embodied Carbon: 0.566 kg CO2e



## Main Features

- / Water resistant & UV resistant
- / Sequentially metre marked
- / Euroclass Cca-s1a-d0-a1
- / Duct grade  rodent resistant
- / Cut to length service
- / 25 Year system warranty

## Product Overview

Enbeam OS2 Singlemode CST Armoured Fibre Optic Cable Loose Tube 12 Core 9/125 LSZH Cca 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 G652D compliant low water peak grade and offers OS2 performance and OS1 backwards compatibility. These compact, lightweight cables 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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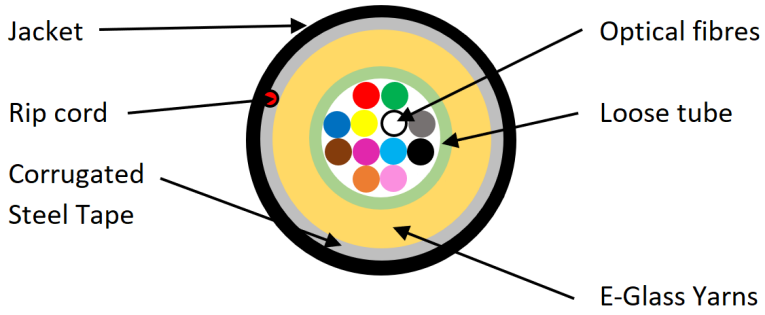
## Product Specifications

| Feature | Values |
|---|---|
| Number of Cores | **12** |
| 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 | **Blue** |
| Flame retardant according to IEC 60332-1-2 | **yes** |
| Reaction-to-fire class according to EN 13501-6 | **Cca** |
| Smoke development class according to EN 13501-6 | **s1a** |
| Euro class flaming droplets/particles according to EN 13501-6 | **d0** |
| Euro class acidity according to EN 13501-6 | **a1** |
| Outer diameter approx. | **9 mm** |



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## Cross-section diagram




## 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 | **Installation** | **-30°C to +70°C** |
| | **Operation** | **-30°C to +70°C** |


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| | | |
|---|---|---|
| | **Storage** | **-30$^{0}$C to +70$^{0}$C** |
| Loose tubes | **Number** | **1** |
| | **Material** | **PBT (Dry tube)** |
| Loose Tube ID/OD | **4-16 Cores** | **2.4/3.2 ± 0.3 mm** |
| | **24 Cores** | **3.2/4.0 ± 0.3 mm** |
| Peripheral Strength Member | | **Glass Yarn** |
| Armoring | **Thickness** | **0.150 mm** |
| | **Material** | **ECCS Tape** |
| Outer Sheath | **Thickness** | **1.8 mm (Nominal)** |
| | **Material** | **LSZH** |
| Ripcord | **Number** | **1** |
| | **Material** | **Polyester** |
| Overall Cable Diameter | **4-16 Cores** | **9.0 ± 0.5 mm** |
| | **24 Cores** | **9.5 ± 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** |



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## 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/nm2.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** |
| 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 |



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| | 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 |
| 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 |


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| 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. |

## Part Code Table

| Part Code | Description |
|---|---|
| 275-306 | **Excel Enbeam OS2 Singlemode Armoured CST Fibre Optic Cable Loose Tube 8 Core 9/125 Cca Blue** |
| 275-307 | **Excel Enbeam OS2 Singlemode Armoured CST Fibre Optic Cable Loose Tube 12 Core 9/125 Cca Blue** |
| 275-309 | **Excel Enbeam OS2 Singlemode Armoured CST Fibre Optic Cable Loose Tube 24 Core 9/125 Cca Blue** |


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