

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

Item Code: 275-307

**excel**  
without compromise.



✕ Duct grade - rodent resistant

✕ Sequentially metre marked

✕ UV Resistant

✕ Cut to length service

✕ 25 Year system warranty

✕ Euroclass Cca-s1a-d0-a1

## Product Overview

Excel corrugated steel tape (CST) OS2 9/125µm 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. These compact, lightweight cables are extremely rugged, provide rodent resistance and are quick and easy to install.

The print legend on the cable now includes information regarding the DOP number, Test and Classification of the cable for traceability.

## 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               |
| Armouring                 | Yes               |
| Rodent resistant          | Yes               |
| Outer sheath material     | Copolymer         |
| Outer sheath colour       | Blue              |

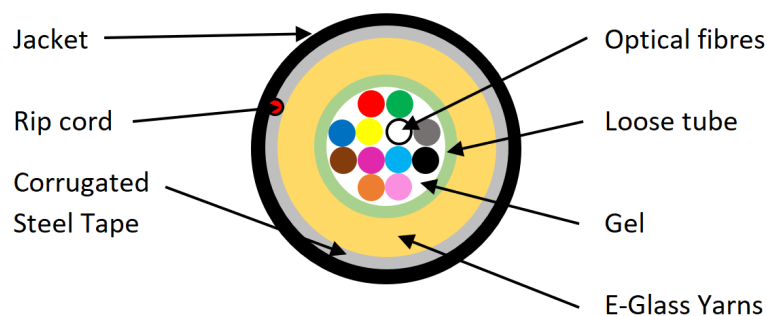
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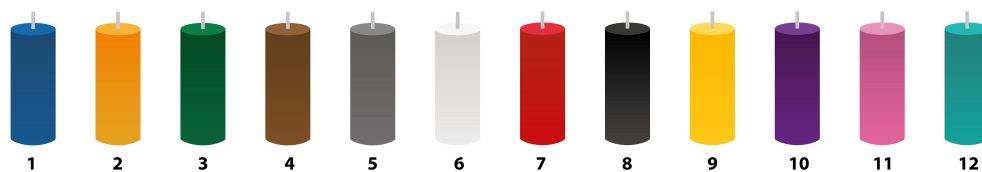


|   |                             |
|---|-----------------------------|
| Reaction-to-fire class according to EN 13501-6                | Cca                         |
| Smoke development class according to EN 13501-6               | s1a                         |
| Euro class flaming droplets/particles according to EN 13501-6 | d0                          |
| Euro class acidity according to EN 13501-6                    | a1                          |
| Halogen free (acc. EN 60754-1/2)                              | Yes                         |
| Flame retardant   | In accordance with EN 50399 |
| Outer diameter approx.  | 9 mm                        |

## 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.

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## Cable specifications

| Features                   |              | Values               |
|----------------------------|--------------|----------------------|
| Tensile Strength           |              | 2000 N               |
| Crush Resistance           |              | 3000 N/m             |
| Torsion                    |              | $\pm 180^\circ$      |
| Temperature performance    | Installation | -30°C to +70°C       |
|                            | Operation    | -30°C to +70°C       |
|                            | Storage      | -30°C to +70°C       |
| Loose tubes                | Number       | 1                    |
|                            | Material     | PBT (Dry tube)       |
| Loose Tube ID/OD           | 4-16 Cores   | 2.4/3.2 $\pm$ 0.3 mm |
|                            | 24 Cores     | 3.2/4.0 $\pm$ 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 $\pm$ 0.5 mm     |
|                            | 24 Cores     | 9.5 $\pm$ 0.5 mm     |
| Cable Weight               | 4-16 Cores   | 100.0 $\pm$ 10 kg/km |
|                            | 24 Cores     | 115 $\pm$ 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       | $\leq 0.36$ dB/km                   |
|                                   | @1550 nm       | $\leq 0.23$ dB/km                   |
| Chromatic Dispersion              | 1285 - 1330 nm | $\leq 3.5$ ps/nm.km                 |
|                                   | 1550 nm        | $\leq 18$ ps/nm.km                  |
| Zero Dispersion Wavelength        |                | 1300 - 1324 nm                      |
| Zero Dispersion Slope             |                | $\leq 0.092$ ps/nm <sup>2</sup> .km |
| Polarisation Mode Dispersion      |                | $\leq 0.2$ ps/√km                   |
| Cut-off Wavelength                |                | $\leq 1260$ nm                      |
| Mode Field Diameter               | @1310 nm       | $9.2 \pm 0.4$ μm                    |
| Core Cladding Concentricity Error |                | $\leq 0.8$ μm                       |
| Cladding Diameter                 |                | $125 \pm 1$ μm                      |
| Cladding Non-circularity          |                | $\leq 1$ %                          |
| Coating Diameter (Uncoloured)     |                | $245 \pm 10$ 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 60754-2:2011         | Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity                                       |
| IEC 61034-2:2005+A1:2013 | Measurement of smoke density of cables burning under defined conditions - Part 2: Test procedure and requirements  |
| IEC 60793-1-1:2017       | 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   |

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|                           |   |
|---------------------------|---|
| 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 50173-1:2011           | 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                      | Restriction of Hazardous Substances - Compliant   |

## Part Number Table

| Part Number | Description   |
|-------------|---|
| 275-305     | Enbeam OS2 Singlemode 9/125 4 Core Armoured CST Fibre Optic Cable Loose Tube Cca - Blue   |
| 275-306     | Enbeam OS2 Singlemode 9/125 8 Core Armoured CST Fibre Optic Cable Loose Tube Cca - Blue   |
| 275-307     | Enbeam OS2 Singlemode 9/125 12 Core Armoured CST Fibre Optic Cable Loose Tube Cca - Blue  |
| 275-308     | Enbeam OS2 Singlemode 9/125 16 Core Armoured CST Fibre Optic Cable Loose Tube Cca - Blue  |
| 295-309     | Enbeam OS2 Singlemode 9/125 24 Core Armoured CST Fibre Optic Cable Loose Tube B2ca - Blue |

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