

✗ 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: 0.620 kg CO<sub>2</sub>e

## Product Overview

Enbeam OM4 Multimode CST Armoured Fibre Optic Cable Loose Tube 8 Core 50/125 LSOH Eca Blue, part of a huge range of OM4 fibre optic cables fully stocked at Mayflex.

Excel corrugated steel tape (CST) OM4 50/125 µm armoured loose tube optical fibre cables have been designed specifically for applications requiring a high degree of mechanical protection.

These compact, lightweight cables are extremely rugged, provide rodent resistance and are quick and easy to install. The cables are constructed around a silica gel filled tube(s) containing up to 24 colour coded 250 µm buffered fibres, which is covered with E-glass strength members.

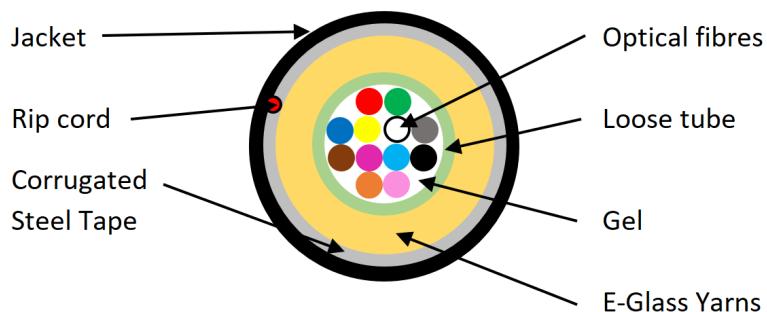
The CST cable has also been designed for direct burial, to ensure the correct installation a sand back fill must be used at all times.

## Product Specifications

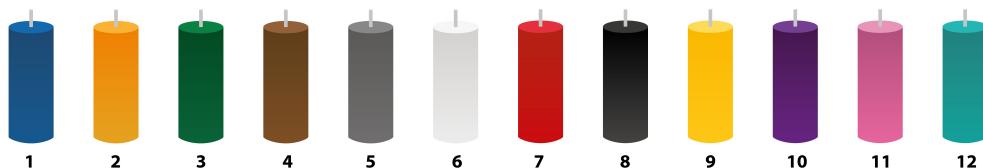
| Feature                   | Values            |
|---------------------------|-------------------|
| Number of Cores           | 8                 |
| Type of tube              | Loose tube        |
| Number of fibres per tube | 8                 |
| Fibre type                | Multi mode 50/125 |
| Category                  | OM4               |
| 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



### 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                 | $\pm 180^\circ$ |
| Temperature performance | -30°C to +70°C  |

# Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 8 Core 50/125 LSOH Eca Blu...

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|                            |            |                      |
|----------------------------|------------|----------------------|
|                            | Operation  | -30°C to +70°C       |
|                            | Storage    | -30°C to +70°C       |
| Loose tubes                | Number     | 1                    |
|                            | Material   | PBT                  |
| Loose Tube ID/OD           | 4-16 Cores | 2.0/2.8 ± 0.1 mm     |
|                            | 24 Cores   | 2.6/3.5 ± 0.1 mm     |
| Peripheral Strength Member |            | Glass Yarn + WS 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 | 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                          | OM1           | OM2          | OM3           | OM4           |
|-----------------------------------|---------------|--------------|---------------|---------------|
| Attenuation @850 nm               | ≤ 3.0 dB/km   | ≤ 2.7 dB/km  | ≤ 2.7 dB/km   | ≤ 2.7 dB/km   |
| Attenuation @1300 nm              | ≤ 1.0 dB/km   | ≤ 0.8 dB/km  | ≤ 0.8 dB/km   | ≤ 0.8 dB/km   |
| Bandwidth @850 nm                 | ≥ 200 MHz.km  | ≥ 500 MHz.km | ≥ 1500 MHz.km | ≥ 3500 MHz.km |
| Bandwidth @1300 nm                | ≥ 600 MHz.km  | ≥ 550 MHz.km | ≥ 500 MHz.km  | ≥ 500 MHz.km  |
| Core Diameter                     | 62.5 ± 2.5 µm | 50 ± 2.5 µm  | 50 ± 2.5 µm   | 50 ± 2.5 µm   |
| Core Cladding Concentricity Error | ≤ 1 µm        | ≤ 1 µm       | ≤ 1 µm        | ≤ 1 µm        |
| Cladding                          | 125 ± 1 µm    | 125 ± 1 µm   | 125 ± 1 µm    | 125 ± 1 µm    |

Diameter

|                             |                          |                          |                          |                          |
|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Cladding Non-circularity    | $\leq 1\%$               | $\leq 1\%$               | $\leq 1\%$               | $\leq 1\%$               |
| Coating Diameter (Coloured) | $250 \pm 15 \mu\text{m}$ |

## 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 60793-1-1:2022        | Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance  |
| IEC 60793-2-10:2017       | Sectional specification for A1 multimode fibres  |
| 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   |
| IEC 60793-1-41:2010       | Optical fibres - Part 1-41: Measurement methods and test procedures - Bandwidth  |
| ITU G.651.1               | Characteristics of a 50/125 $\mu\text{m}$ multimode graded index optical fibre cable for the optical access network  |
| 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.  |

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|  |   |
|--|---|
| ISO/IEC 11801-1:2017                       | Heat release and smoke production measurement on cables during flame spread test. Test apparatus, procedures, results   |
| ANSI/TIA 568-3.D                           | Information technology - Generic cabling for customer premises: Part 1 General Requirements   |
| ANSI/TIA/EIA 598-D                         | Optical Fiber Cabling and Components Standard   |
| IEC 60794-1-2/F5                           | Optical Fibre Cable Colour Coding   |
| RoHS-II/-III (2011/65/EU & 2015/863): 2023 | Generic specification – Optical fibre cable test procedures – Bending test (Method F5)  |
| WFD: 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). |
| SCIP: 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   |
|-------------|---|
| 204-204     | Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 4 Core 50/125 LSOH Eca Blue  |
| 204-208     | Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 8 Core 50/125 LSOH Eca Blue  |
| 204-212     | Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 12 Core 50/125 LSOH Eca Blue |
| 204-216     | Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 16 Core 50/125 LSOH Eca Blue |
| 204-224     | Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 24 Core 50/125 LSOH Eca Blue |

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

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