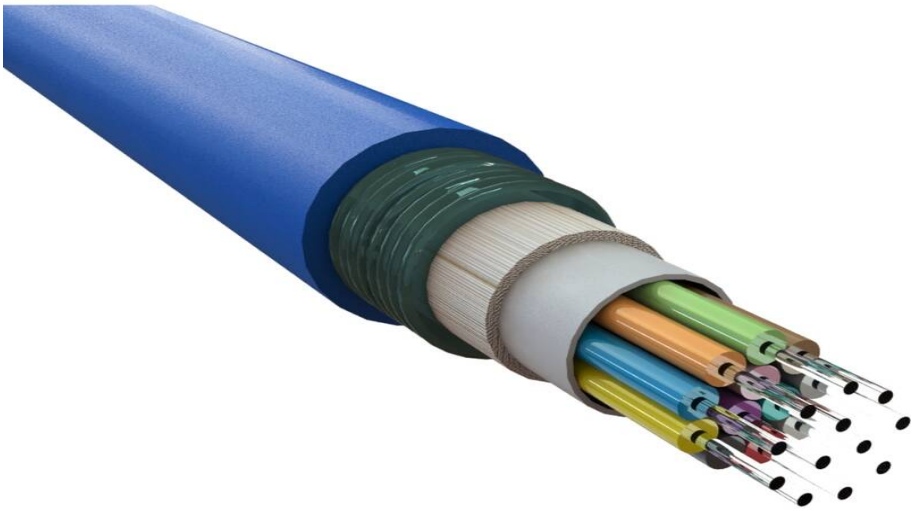
# Excel Enbeam OM4 Multimode Armoured CST Fibre Optic Cable Loose Tube 24 Core 50/125 LSOH Eca Bl...

**Part Code: 204-224**

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CIBSE TM65 Embodied Carbon: 0.731 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 OM4 Multimode CST Armoured Fibre Optic Cable Loose Tube 24 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.

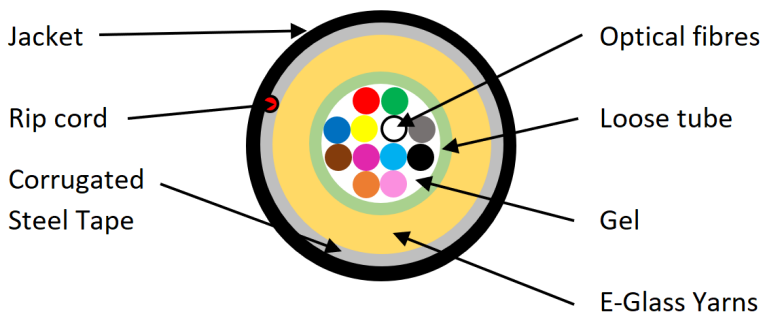

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## Product Specifications

| Feature | Values |
|---|---|
| Number of Cores | **24** |
| Type of tube | **Loose tube** |
| Number of fibres per tube | **24** |
| Fibre type | **Multi mode 50/125** |
| Category | **OM4** |
| 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 | **Eca** |
| Outer diameter approx. | **8.4 mm** |

### Cross-section diagram

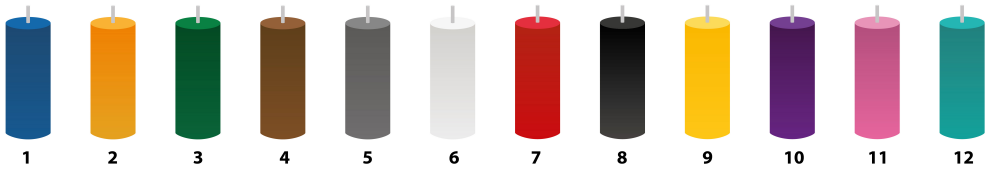





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### Colour coding (as per TIA-598-C)




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 $^0$** |
| Temperature performance | **Installation** | **-30$^0$C to +70$^0$C** |
| | **Operation** | **-30$^0$C to +70$^0$C** |
| | **Storage** | **-30$^0$C to +70$^0$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)** |



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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 | | OM1 | OM2 | OM3 | OM4 |
|---|---|---|---|---|---|
| Attenuation | **@850 nm** | **≤ 3.0 dB/km** | **≤ 2.7 dB/km** | **≤ 2.7 dB/km** | **≤ 2.7 dB/km** |
| | **@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** |
| | **@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** | **≤ 1µm** |
| Cladding Diameter | | **125 ± 1 µm** | **125 ± 1 µm** | **125 ± 1 µm** | **125 ± 1 µm** |



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|---|---|---|---|---|
| Cladding Non-circularity | ≤ 1 % | ≤ 1 % | ≤ 1 % | ≤ 1 % |
| Coating Diameter (Coloured) | 250 ± 15 µm | 250 ± 15 µm | 250 ± 15 µm | 250 ± 15 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 60793-1-1:2022 | 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 |


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|---|---|
| ITU G.651.1 | Characteristics of a 50/125 µm 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. 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 |



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|---|---|
| | (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 |
|---|---|
| 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** |


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