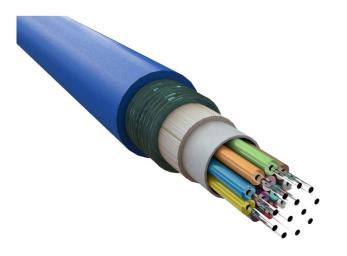


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- X Water Resistant & UV Resistant
- X Duct grade Rodent resistant
- X Sequentially metre marked
- X Cut to length service
- X Euroclass Eca
- × 25 Year system warranty

#### **Product Overview**

Enbeam OM4 Multimode CST Armoured Fibre Optic Cable Loose Tube 4 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 50/125µm 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  $250\mu m$  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**

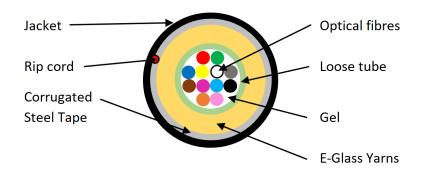
| Feature                   | Values                          |
|---------------------------|---------------------------------|
| Number of Cores           | 4                               |
| Type of tube              | Loose tube                      |
| Number of fibres per tube | 4                               |
| Fibre type                | Multi mode 50/125               |
| Category                  | OM4                             |
| Rodent resistant          | yes                             |
| Outer sheath material     | Copolymer, thermoplastic (LS0H) |
| Outer sheath colour       | Blue                            |



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| 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                 |              | ± 180 °        |
| Temperature performance | Installation | -30°C to +70°C |
|                         | Operation    | -30°C to +70°C |
|                         | Storage      | -30°C to +70°C |



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| Loose tubes                | Number     | 1                             |
|----------------------------|------------|-------------------------------|
|                            | Material   | PBT                           |
| Loose Tube ID/OD           | 4-16 Cores | $2.0/2.8 \pm 0.1  \text{mm}$  |
|                            | 24 Cores   | $2.6/3.5 \pm 0.1 \mathrm{mm}$ |
| 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 | $8.4 \pm 0.5  \text{mm}$      |
|                            | 24 Cores   | $9.2 \pm 0.5  \text{mm}$      |
| Cable Weight               | 4-16 Cores | $100.0 \pm 10  \text{kg/km}$  |
|                            | 24 Cores   | $115 \pm 10  \mathrm{kg/km}$  |
| 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<br>MHz.km              | ≥ 500<br>MHz.km     | ≥ 1500<br>MHz.km    | ≥ 3500<br>MHz.km    |
|                                         | @1300 nm | ≥ 600<br>MHz.km              | ≥ 550<br>MHz.km     | ≥ 500<br>MHz.km     | ≥ 500<br>MHz.km     |
| Core Diameter                           |          | $62.5 \pm 2.5  \mu \text{m}$ | $50 \pm 2.5  \mu m$ | $50 \pm 2.5  \mu m$ | $50 \pm 2.5  \mu m$ |
| Core Cladding<br>Concentricity<br>Error |          | ≤1μm                         | ≤1 μm               | ≤1μm                | ≤ 1µm               |
| Cladding<br>Diameter                    |          | $125 \pm 1  \mu m$           | $125 \pm 1  \mu m$  | 125 ± 1 μm          | $125 \pm 1  \mu m$  |
| Cladding Non-<br>circularity            |          | ≤1%                          | ≤1%                 | ≤1%                 | ≤1%                 |



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Coating Diameter (Coloured)  $250 \pm 15 \,\mu m$ 

 $250 \pm 15 \, \mu m$ 

 $250 \pm 15 \,\mu m$ 

 $250 \pm 15 \, \mu m$ 

### **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<br>defined conditions - Part 2: Test procedure and<br>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 $\mu m$ multimode graded index optical fibre cable for the optical access network                                                                  |
| EN 50173-1:2018           | Information technology. Generic cabling systems -<br>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    |
|                           |                                                                                                                                                                                |



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| 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)                                                                                          |
| RoHS-II/-III (2011/65/EU & 2015/863): 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). |
| WFD: 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.



Contact us at sales@excel-networking.com

E&OE. Excel is a registered trade name of Mayflex Holdings Ltd.