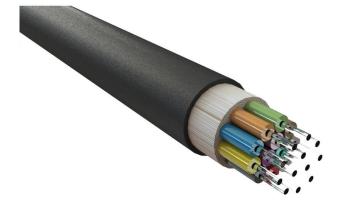
Item Code: 204-116











- X Water resistant & UV resistant
- X Duct grade rodent resistant
- X Sequentially metre marked
- X Cut to length service
- X Euroclass Cca-s1a-d0-a1
- X 25 year system warranty
- X CIBSE TM65 Embodied Carbon: 0.306 kg CO2e

#### **Product Overview**

Enbeam OM4 multimode fibre optic cable tight buffered 16 core 50/125~G.657.A2 bend insensitive LSOH Cca black, part of a huge range of OM4 fibre optic cables fully stocked at Mayflex. Excel OM4  $50/125~\mu m$  tight buffered optical fibre cables have been designed specifically for internal and external applications. The cables are constructed around an E-Glass strength member containing up to 24 colour coded  $900~\mu m$  tight buffered fibres, covered with a flame retardant, low smoke zero halogen, outer sheath.

These compact, lightweight cables are extremely flexible and are quick and easy to install.

#### **Product Specifications**

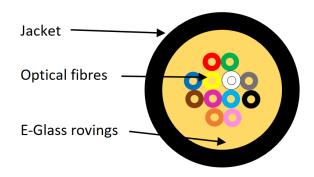
| Feature                                    | Values                          |
|--|---------------------------------|
| Number of Cores                            | 16                              |
| Type of tube                               | Tight                           |
| Fibre type                                 | Multi mode 50/125               |
| Category                                   | OM4                             |
| Rodent resistant                           | yes                             |
| Outer sheath material                      | Copolymer, thermoplastic (LS0H) |
| Outer sheath colour                        | Black                           |
| Flame retardant according to IEC 60332-1-2 | yes                             |

Item Code: 204-116



| Low smoke (acc. IEC 61034-2)                                  | yes  |
|---|------|
| Reaction-to-fire class according to EN 13501-6                | Cca  |
| Smoke development class according to EN 13501-6               | sla  |
| Euro class flaming droplets/particles according to EN 13501-6 | d0   |
| Euro class acidity according to EN 13501-6                    | al   |
| Outer diameter approx.  | 8 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.

Item Code: 204-116



### **Cable specifications**

| Features             |                   | Values  |
|----------------------|-------------------|---|
| Tight Buffered Fiber | Material          | LSZH  |
|                      | Diameter          | 0.85±0.05mm   |
| Strength Member      | Material          | E-glass Yams  |
| Sheath               | Material          | LSZH  |
|                      | Thickness         | Typical 1.1mm   |
| Cable Diameter       | Diameter (±0.3mm) | Approx. 6.5mm(4 cores), 6.6mm(6 cores), 7.0mm(8 cores)            |
|                      |                   | 7.0mm(12 cores), 8.0mm(16 cores), 8.5mm(24 cores)                 |
| Cable Weight         |                   | Approx. 34kg/km(4 cores), 36kg/km<br>(6 cores), 39kg/km (8 cores) |
|                      |                   | 43kg/km (12 cores), 52kg/km (16 cores), 63kg/km (24 cores)        |
| Tensile Strength     | Installation      | 800N(≤12 cores),1100N(>12 cores)                                  |
|                      | Working           | 400N(≤12 cores),550N(>12 cores)                                   |
| Cable Impact         |                   | 1J  |
| Crush Resistance     | Installation      | 1000N   |
|                      | Working           | 300N  |
| Torsion              |                   | Change of Attenuation $\leq 0.10$ dB (SM fiber)                   |
|                      |                   | Change of Attenuation $\leq 0.30$ dB (MM fiber)                   |
| Temperature Range    | Installation      | -30°C to +60°C  |
|                      | Working           | -30°C to +60°C  |
|                      | Storage           | -40°C to +60°C  |
| Bending Radius       | Short term        | 20 x Diameter   |
|                      | Long term         | 10 x Diameter   |

Item Code: 204-116



### Fibre specifications

| Features                                       |                    | Values                   |
|--|--------------------|--------------------------|
| Attenuation                                    | @850 nm            | 3.5dB/km (maximum)       |
|  | @1300 nm           | 1.5dB/km (maximum)       |
|  | For any 1000 metre | Max. 0.1dB/km            |
| Overfilled modal bandwidth                     | @850 nm            | ≥3500 MHz/km             |
|  | @1300 nm           | ≥500 MHz/km              |
| Effective modal bandwidth                      | @850 nm            | ≥4700 MHz/km             |
| Core diameter                                  |                    | 50±2.5 μm                |
| Core non-circularity                           |                    | ≤5%                      |
| Cladding diameter                              |                    | 125.0±1.0 μm             |
| Cladding non-circularity                       |                    | ≤1%                      |
| Core - cladding concentricity error            |                    | ≤1.5 μm                  |
| Primary coating diameter - uncolored           |                    | 242±7 μm                 |
| Primary coating diameter - colored             |                    | 250±15 μm                |
| Primary coating non-circularity                |                    | ≤5%                      |
| Primary coating - cladding concentricity error |                    | ≤12 µm                   |
| Group index of refraction                      | @850 nm            | 1.482                    |
|  | @1300 nm           | 1.477                    |
| Proof stress level                             |                    | ≥0.7(≈1% strain) Gpa     |
| Typical average strip force                    |                    | 1.7 N                    |
| Strip force (peak)                             |                    | 1.3 ≤ Fpeak.strip ≤8.9 N |
| Numerical aperture                             |                    | $0.200 \pm 0.015$        |
| Fiber bending loss R-7.5 mm                    | @850 nm            | ≤0.2dB                   |
|  | @1300 nm           | ≤0.5dB                   |
| Fiber bending loss R-15 mm                     | @850 nm            | ≤0.1dB                   |
|  | @1300 nm           | ≤0.3dB                   |

Item Code: 204-116



#### **Standards**

| Applicable standard       | Subject  |
|---------------------------|--|
| IEC 60794-2-20:2013       | Optical fibre cables - Part 2-20: Indoor cables - Family specification for multi-fibre optical cables  |
| 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 $\mu m$ 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.<br>Heat release and smoke production measurement on<br>cables during flame spread test. Test apparatus,<br>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  |

Item Code: 204-116



| ANSI/TIA/EIA 598-D                         | Optical Fibre Cable Colour Coding   |
|--|---|
| 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   |
|-------------|---|
| 204-104     | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 4 Core 50/125 LSOH Cca Black  |
| 204-106     | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 6 Core 50/125 LSOH Cca Black  |
| 204-108     | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 8 Core 50/125 LSOH Cca Black  |
| 204-112     | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 12 Core 50/125 LSOH Cca Black |
| 204-116     | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 16 Core 50/125 LSOH Cca Black |
| 204-124     | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 24 Core 50/125 LSOH Cca Black |
| 204-124-RD  | Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 24 Core 50/125 LSOH Cca Red   |

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