

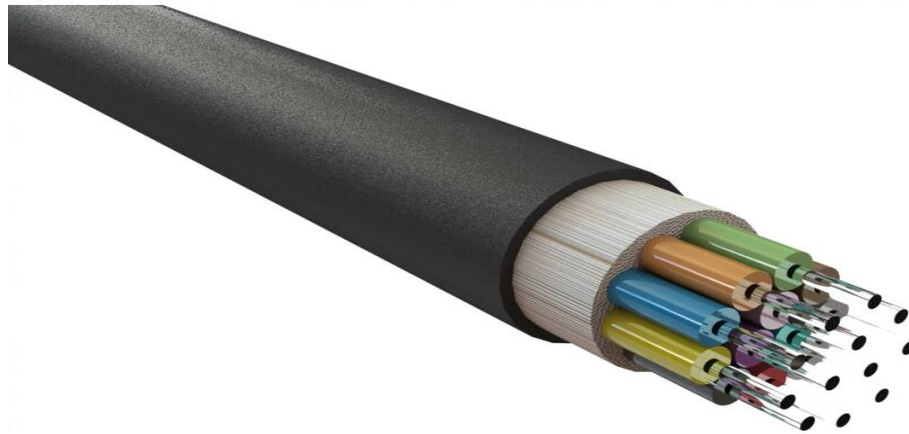
Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 12 Core 50/125 LSOH Cca Black

excel
without compromise.

Part Code: 204-112

sales@excel-networking.com
excel-networking.com

CIBSE TM65 Embodied Carbon: 0.219 kg CO2e



Main Features

- / Water resistant & UV resistant
- / Duct grade - rodent resistant
- / Sequentially metre marked
- / Cut to length service
- / Euroclass Cca-s1a-d0-a1
- / 25 year system warranty

Product Overview

Enbeam OM4 multimode fibre optic cable tight buffered 12 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 µm 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 µm 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.

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Product Specifications

| Feature | Values |
|---|---------------------------------|
| Number of Cores | 12 |
| Type of tube | Tight |
| Fibre type | Multi mode 50/125 |
| Category | OM4 |
| Rodent resistant | yes |
| Outer sheath material | Copolymer, thermoplastic (LSOH) |
| Outer sheath colour | Black |
| Flame retardant according to IEC 60332-1-2 | yes |
| 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 | s1a |
| Euro class flaming droplets/particles according to EN 13501-6 | d0 |
| Euro class acidity according to EN 13501-6 | a1 |
| Outer diameter approx. | 7 mm |

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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 |
|----------------------|------------------|----------------------|
| Tight Buffered Fiber | Material | LSZH |
| | Diameter | 0.85±0.05mm |
| Strength Member | Material | E-glass Yarns |
| Sheath | Material | LSZH |
| | Thickness | Typical 1.1mm |

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| | | |
|-------------------|---------------------------------|--|
| Cable Diameter | Diameter ($\pm 0.3\text{mm}$) | 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 (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 $\leq 0.10\text{dB}$ (SM fiber) Change of Attenuation $\leq 0.30\text{dB}$ (MM fiber) |
| Temperature Range | Installation | -30°C to $+60^{\circ}\text{C}$ |
| | Working | -30°C to $+60^{\circ}\text{C}$ |
| | Storage | -40°C to $+60^{\circ}\text{C}$ |
| Bending Radius | Short term | 20 x Diameter |
| | Long term | 10 x Diameter |

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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 ≤ F _{peak.strip} ≤ 8.9 N |

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| Numerical aperture | | 0.200 ± 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 |

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 |

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| 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 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 |
| 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 (DEHP, BBP, DBP, DIBP) to Annex II — compliant. |
| 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). |

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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 |
|------------|---|
| 204-104 | 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 |