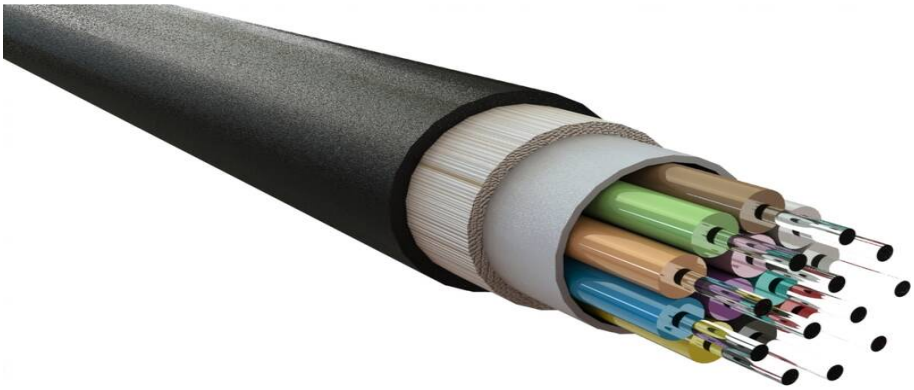
# Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 16 Core 62.5/125 Dca Black

**Part Code: 200-081**

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

CIBSE TM65 Embodied Carbon: 0.190 kg CO2e



## Main Features

- Duct grade rodent resistant
- Sequentially metre marked
- Euroclass Dca-s2-d2-a1
- Cut to length service
- 25 Year system warranty
- CIBSE TM65 Embodied Carbon: 0.190 kg CO2e

## Product Overview

Excel OM1 62.5/125 µm loose tube optical fibre cables have been designed specifically for internal and external applications. These compact, lightweight cables are extremely flexible and are quick and easy to install.

The cables are constructed around a gel filled (non□dripping and silicon free) tube containing up to 24 colour coded 250µm primary coated fibres. This tube is covered with an E-Glass strength member.

The print legend on the cable now includes information regarding the DOP number, Test and Classification of the cable for traceability.


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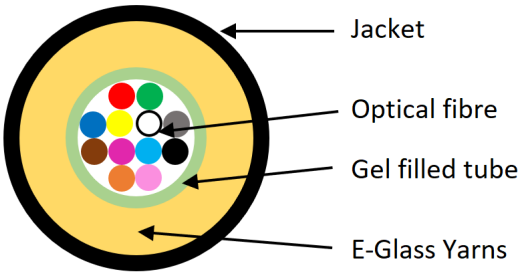
## Product Specifications

| Feature | Values |
|---|---|
| Number of Cores | **16** |
| Type of tube | **Loose tube** |
| Number of fibres per tube | **16** |
| Fibre type | **Multi mode 62.5/125** |
| Category | **OM1** |
| Rodent resistant | **yes** |
| Outer sheath material | **Copolymer, thermoplastic (LS0H)** |
| 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 | **Dca** |
| Smoke development class according to EN 13501-6 | **s2** |
| Euro class flaming droplets/particles according to EN 13501-6 | **d2** |
| Euro class acidity according to EN 13501-6 | **a1** |
| Outer diameter approx. | **6 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 |
|---|---|---|
| Loose Tube | **Material** | **PBT** |
| | **Diameter** | **2.8±0.1mm(2-12 cores), 3.5±0.20mm(16-24 cores)** |
| | **Thickness** | **0.35±0.05mm** |
| Strength Member | **Material** | **E-glass Yarns** |
| Sheath | **Material** | **LSZH** |
| | **Thickness** | **Typical 1.1mm** |


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|---|---|---|
| Cable Diameter | **Diameter (±0.3mm)** | **6.0±0.20mm(2-16 cores), 6.5±0.20mm(18-24 cores)** |
| Cable Weight | | **Approx. 40kg/km(2-16 cores), 45kg/km(18-24 cores)** |
| Tensile Strength | **Installation** | **1000N** |
| | **Working** | **300N** |
| Cable Impact | | **1J** |
| Crush Resistance | **Installation** | **1000N** |
| | **Working** | **300N** |
| Torsion | | **Change of Attenuation ≤ 0.10dB (SM fiber)** |
| | | **Change of Attenuation ≤ 0.30dB (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** |
| Water Penetration | | **No water on free end** |

## Fibre specifications

| Features | | Values |
|---|---|---|
| Attenuation | **@1310nm** | **3.5 dB/km(Maximum)** |
| | **@1550nm** | **1.5 dB/km(Maximum)** |
| | **For any 1000 metre** | **Max. 0.2dB/km** |


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| | | |
|---|---|---|
| Overfilled Modal Bandwidth | **@850nm** | **200 MHz.km** |
| | **@1300nm** | **600 MHz.km** |
| Core Diameter | | **62.5±2.5um** |
| Core Non-circularity | | **≤5%** |
| Cladding Diameter | | **125.0±1.0um** |
| Cladding Non-circularity | | **≤5%** |
| Core - Cladding Concentricity Error | | **≤1.5um** |
| Primary coating diameter - Uncolored | | **242±7um** |
| Primary Coating Diameter - Colored | | **250±15um** |
| Primary Coating Non-circularity | | **≤6%** |
| Primary Coating – Cladding Concentricity Error | | **≤12um** |
| Group Index of Refraction | **@850nm** | **1.496** |
| | **@1300nm** | **1.491** |
| Proof stress level | | **≥0.69(≈1% strain) Gpa** |
| Typical Average Strip Force | | **1.7N** |
| Strip force(peak) | | **1.3≤Fpeak.strip≤8.9N** |
| Numerical Aperture | | **0.275±0.015** |



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## 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 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). |
| 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. |

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## Part Code Table

| Part Code | Description |
|---|---|
| 200-047 | **Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 4 Core 62.5/125 Dca Black** |
| 200-060 | **Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 6 Core 62.5/125 Dca Black** |
| 200-067 | **Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 8 Core 62.5/125 Dca Black** |
| 200-081 | **Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 16 Core 62.5/125 Dca Black** |
| 200-084 | **Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 24 Core 62.5/125 Dca Black** |
| 200-087 | **Excel Enbeam OM1 Multimode Fibre Optic Cable Loose Tube 12 Core 62.5/125 Dca Black** |



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