

☒ UV and water resistant construction

☒ Duct grade rodent resistant

☒ Cut to length service

☒ Sequentially metre marked

☒ 25 Year system warranty

☒ Euroclass Cca-s1a-d0-a1

☒ CIBSE TM65 Embodied Carbon: 0.261 kg CO₂e

Product Overview

Excel OM3 50/125 μm tight buffered 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.

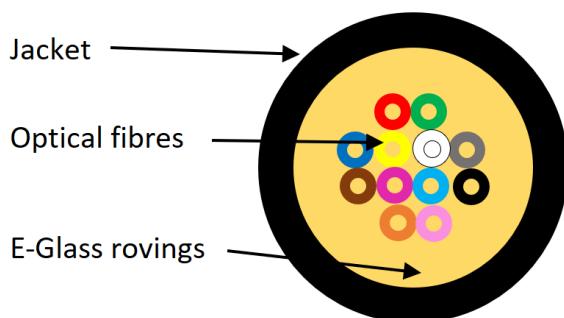
The cables are constructed around an E-Glass strength member containing up to 24 colour coded 900 μm tight buffered fibres, covered with a flame retardant, low smoke zero halogen, outer sheath.

Product Specifications

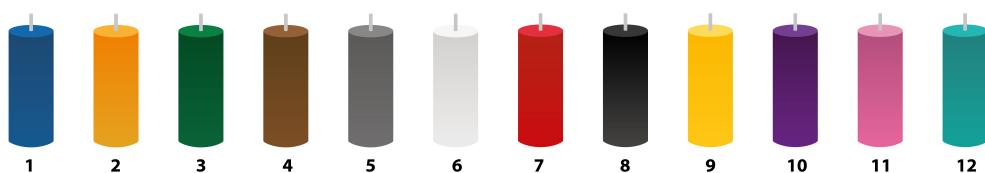
| Feature | Values |
|--|---------------------------------|
| Number of Cores | 16 |
| Type of tube | Tight |
| Fibre type | Multi mode 50/125 |
| Category | OM3 |
| Rodent resistant | yes |
| Outer sheath material | Copolymer, thermoplastic (LSOH) |
| Outer sheath colour | Black |
| Flame retardant 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. | 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.

Cable specifications

| Features | Values |
|----------------------|---------------|
| Tight Buffered Fiber | Material |
| | LSZH |
| Strength Member | Material |
| | E-glass Yarns |

Excel Enbeam OM3 Multimode Fibre Optic Cable

Tight Buffered 16 Core 50/125 Cca Black

Item Code: 200-158



| | | |
|-------------------|---------------------------------|--|
| Sheath | Material | LSZH |
| | Thickness | Typical 1.1mm |
| 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°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 |

Fibre specifications

| Features | Values |
|----------------------------|---|
| Attenuation | @850nm 3.5 dB/km(Maximum) @1300nm 1.5 dB/km(Maximum) |
| | For any 1000 metre Max. 0.1dB/km |
| Overfilled Modal Bandwidth | @850nm ≥ 1500 MHz.km @1300nm ≥ 500 MHz.km |
| Effective modal bandwidth | @850nm ≥ 2000 MHz.km |
| Core Diameter | 50 $\pm 2.5\mu\text{m}$ |

| | | |
|---|---------|----------------------|
| Core Non-circularity | | ≤5% |
| Cladding Diameter | | 125.0±1.0um |
| Cladding Non-circularity | | ≤1% |
| Core - Cladding Concentricity Error | | ≤1.0um |
| Primary coating diameter - Uncolored | | 242±7um |
| Primary Coating Diameter - Colored | | 250±15um |
| Primary Coating Non-circularity | | ≤5% |
| Primary Coating - Cladding Concentricity Error | | ≤12um |
| Group Index of Refraction | @850nm | 1.482 |
| | @1300nm | 1.477 |
| Proof stress level | | ≥0.7(≈1% strain) Gpa |
| Typical Average Strip Force | | 1.7N |
| Strip force(peak) | | 1.3≤Fpeak.strip≤8.9N |
| Numerical Aperture | | 0.200±0.015 |
| Fiber Bending Loss R-7.5mm | @850nm | ≤0.2dB |
| | @1300nm | ≤0.5dB |
| Fiber Bending Loss R-15mm | @850nm | ≤0.1dB |
| | @1300nm | ≤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 |

Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 16 Core 50/125 Cca Black

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|--|---|
| 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 |
| 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 |
|-------------|--|
| 200-118 | Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 6 Core 50/125 Cca Black |
| 200-155 | Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 4 Core 50/125 Cca Black |
| 200-156 | Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 8 Core 50/125 Cca Black |
| 200-157 | Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 12 Core 50/125 Cca Black |
| 200-158 | Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 16 Core 50/125 Cca Black |
| 200-159 | Excel Enbeam OM3 Multimode Fibre Optic Cable Tight Buffered 24 Core 50/125 Cca Black |

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

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