# Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 24 Core 62.5/125 Cca Black 



## Sequentially Metre Marked

## خ 200/600MHz.km Bandwidth

## $\chi$ Cut to length service

## $\lambda$ Euroclass Cca-s1a-d0-a1

## Product Overview

Excel OM1 $62.5 / 125 \mu \mathrm{~m}$ 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 swellable reinforced yarns as common strength members containing up to 24 colour coded $900 \mu \mathrm{~m}$ tight buffered fibres, covered with a flame retardant, low smoke zero halogen, outer sheath.

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

Product Specifications

| Feature | Values |
| :--- | :--- |
| Number of Cores | 24 |
| Type of tube | Tight |
| Fibre type | Multi mode 62.5/125 |
| Category | OM1 |
| Rodent resistant | yes |
| Outer sheath material | Copolymer, thermoplastic (LSOH) |
| Outer sheath colour | Black |
| Flame retardant according to IEC 60332-1-2 | 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 | d0 |
| 13501-6 |  |

Euro class acidity according to EN 13501-6
Outer diameter approx.

## al

8.5 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 70 mm 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 | $0.85 \pm 0.05 \mathrm{~mm}$ |
| Sheath | Material | E-glass Yarns |
| Cable Diameter | Thickness | LSZH |


| Cable Weight |  | Approx. $34 \mathrm{~kg} / \mathrm{km}$ (4 cores), $36 \mathrm{~kg} / \mathrm{km}$ (6 cores), $39 \mathrm{~kg} / \mathrm{km}$ (8 cores) |
| :---: | :---: | :---: |
|  |  | $43 \mathrm{~kg} / \mathrm{km}$ ( 12 cores), $52 \mathrm{~kg} / \mathrm{km}$ ( 16 cores), $63 \mathrm{~kg} / \mathrm{km}$ (24 cores) |
| Tensile Strength | Installation | 800N( $\leq 12$ cores),1100N(>12 cores) |
|  | Working | 400 N ( $\leq 12$ cores),550N( $>12$ cores) |
| Cable Impact |  | $1)$ |
| Crush Resistance | Installation | 1000N |
|  | Working | 300 N |
| Torsion |  | Change of Attenuation $\leq 0.10 \mathrm{~dB}$ (SM fiber) |
|  |  | Change of Attenuation $\leq 0.30 \mathrm{~dB}$ (MM fiber) |
| Temperature Range | Installation | $-30^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ |
|  | Working | $-30^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ |
|  | Storage | $-40^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ |
| Bending Radius | Short term | $20 \times$ Diameter |
|  | Long term | $10 \times$ Diameter |

Fibre specifications

| Features | Values |  |
| :--- | :--- | :--- |
| Attenuation | @1310nm | $3.5 \mathrm{~dB} / \mathrm{km}($ Maximum $)$ |
|  | $@ 1550 \mathrm{~nm}$ | $1.5 \mathrm{~dB} / \mathrm{km}($ Maximum $)$ |
| Overfilled Modal Bandwidth | For any 1000 metre | Max. $0.2 \mathrm{~dB} / \mathrm{km}$ |
| Core Diameter | $@ 850 \mathrm{~nm}$ | $200 \mathrm{MHz} . \mathrm{km}$ |
| Core Non-circularity | $@ 1300 \mathrm{~nm}$ | $600 \mathrm{MHz} . \mathrm{km}$ |
| Cladding Diameter |  | $62.5 \pm 2.5 \mathrm{um}$ |
| Cladding Non-circularity | $\leq 5 \%$ |  |
| Core - Cladding Concentricity Error |  | $125.0 \pm 1.0 \mathrm{um}$ |

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Item Code: 200-142

| Primary coating diameter - | $242 \pm 7 \mathrm{um}$ |  |
| :--- | :--- | :--- |
| Uncolored |  |  |
| Primary Coating Diameter - Colored |  | $250 \pm 15 \mathrm{um}$ |
| Primary Coating Non-circularity | $\leq 6 \%$ |  |
| Primary Coating - Cladding <br> Concentricity Error | $\leq 12 \mathrm{um}$ |  |
| Group Index of Refraction | $@ 850 \mathrm{~nm}$ | 1.496 |
|  | $@ 1300 \mathrm{~nm}$ | 1.491 |
| Proof stress level |  | $\geq 0.69(\approx 1 \%$ strain) Gpa |
| Typical Average Strip Force | 1.7 N |  |
| Strip force(peak) | $1.3 \leq F p e a k . s t r i p \leq 8.9 \mathrm{~N}$ |  |
| Numerical Aperture | $0.275 \pm 0.015$ |  |

## Standards

| Applicable standard | Subject |
| :--- | :--- |
| IEC 60794-2-20:2013 | Optical fibre cables - Part 2-20: Indoor cables - Family <br> specification for multi-fibre optical cables |
| IEC 60332-1-2:2004 | Tests on electric and optical fibre cables under fire <br> conditions. Test for vertical flame propagation for a single <br> insulated wire or cable. Procedure for 1 kW pre-mixed <br> flame |
| IEC 60754-2:2011 | Test on gases evolved during combustion of materials <br> from cables - Part 2: Determination of acidity (by pH <br> 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 <br> 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 <br> procedures - Fibre geometry |
| IEC 60793-1-21:2001 | Optical fibres - Part 1-21: Measurement methods and test <br> procedures - Coating geometry |
| IEC 60793-1-22:2001 | Optical fibres - Part 1-22: Measurement methods and test <br> procedures - Length measurement |
| IEC 60793-1-30:2010 | Optical fibres - Part 1-30: Measurement methods and test |

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IEC 60793-1-41:2010

ITU G.651.1

EN 50173-1:2018

EN 50575: 2014 + A1: 2016

EN 50399:2011+A1:2016

ISO/IEC 11801-1:2017

ANSI/TIA 568-3.D
ANSI/TIA/EIA 598-D
RoHS-III-III (2011/65/EU \& 2015/863): 2023

WFD: 2023
SCIP: 2023

POPs (EU) No 2019/1021
procedures - Fibre proof test
Optical fibres - Part 1-41: Measurement methods and test procedures - Bandwidth

Characteristics of a $50 / 125 \mu \mathrm{~m}$ multimode graded index optical fibre cable for the optical access network

Information technology. Generic cabling systems General requirements

Power, control and communication cables - Cables for general applications in construction works subject to reaction to fire requirements

Common test methods for cables under fire conditions. Heat release and smoke production measurement on cables during flame spread test. Test apparatus, procedures, results

Information technology - Generic cabling for customer premises: Part 1 General Requirements

Optical Fiber Cabling and Components Standard Optical Fibre Cable Colour Coding

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).

Compliant to Waste Framework Directive
Compliant - Does Not Contain Substances of Concern In articles as such or in complex objects (Products)

EU Regulation for the restriction of Persistent Organic Pollutants.

## Part Number Table

Part Number
200-110

200-116

200-130

200-140

200-141

## Description

Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 4 Core 62.5/125 Cca Black

Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 6 Core 62.5/125 Cca Black

Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 8 Core 62.5/125 Cca Black

Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 12 Core 62.5/125 Cca Black

Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 16 Core

## 62.5/125 Cca Black

Excel Enbeam OM1 Multimode Fibre Optic Cable Tight Buffered 24 Core 62.5/125 Cca Black

