Excel Enbeam OS2 ULW Rodent Resistant G.657.A1 Aerial Fibre Cable LT 96 Core Fca Black

Part Code: 328-096

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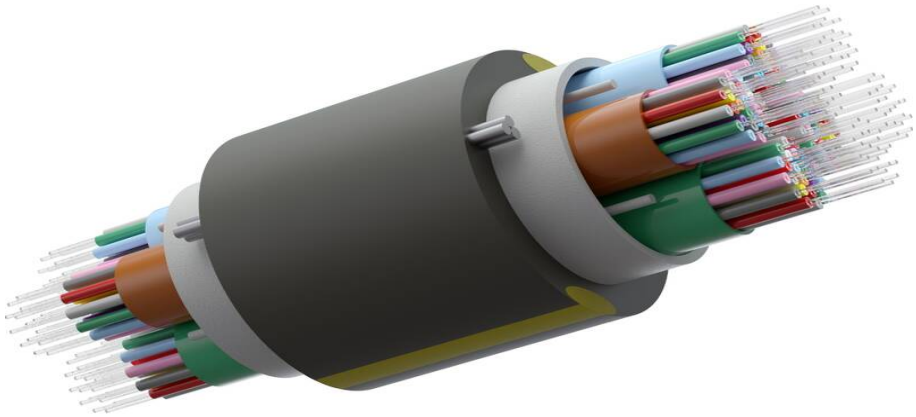
excel-networking.com

CIBSE TM65 Embodied Carbon: 0.239 kg CO2e



Main Features

- / G.657.A1 bend insensitive
- / Ultra-light weight design
- / Euroclass: Fca
- / Rodent resistant
- / 7 mm cable diameter
- / PIA approved

Product Overview

Enbeam OS2 ultra-light weight SM G.657.A1 aerial fibre cable loose tube 96 core 9/125 HDPE Fca black, part of a huge range of OS2 Fibre optic cables fully stocked at Mayflex.
The Enbeam ultra-light weight fibre has been designed for aerial installations into the fibre access network.

The cable is constructed from multiple gel filled micromodules, overlaid with water swellable yarn and water blocking tape and then covered with a High Density Polyethylene (HDPE) outer jacket with yellow stripes containing 2 brass coated steel wire strength members and offers 4 to 96 fibre core counts.

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Product Specifications

Feature	Values
Number of Cores	**96**
Type of tube	**Loose tube**
Number of fibres per tube	**24**
Fibre type	**Single mode 9/125**
Category	**OS2**
Outer sheath material	**HDPE**
Outer sheath colour	**Black**
Reaction-to-fire class according to EN 13501-6	**Fca**
Outer diameter approx.	**7 mm**

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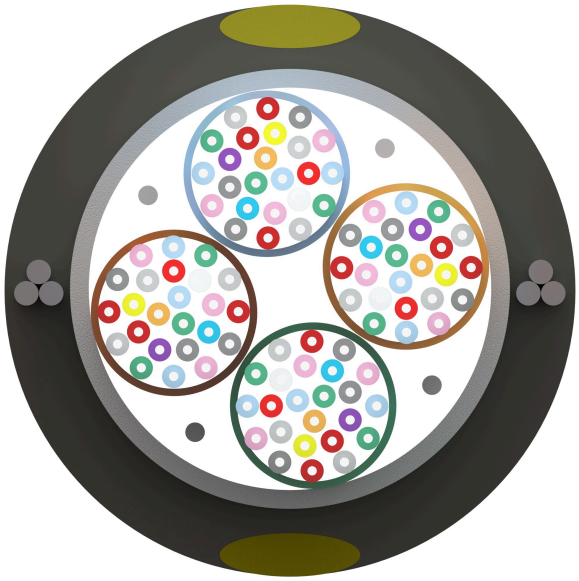
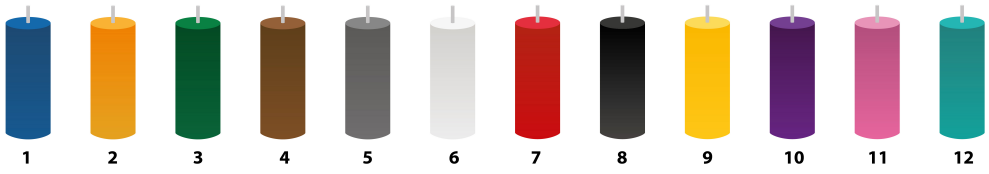
Product drawing



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.

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Fibre specifications

Features		Values
Attenuation	**@1310 nm**	**≤0.34 dB/km**
	@1550 nm	**≤0.20 dB/km**
	@1625 nm	**≤0.22 dB/km**
Chromatic dispersion coefficient	**1285 nm – 1330 nm**	**≤3.5ps/km·nm**
	@1550 nm	**≤18.0ps/km·nm**
	1565 nm - 1625 nm	**≤22.0ps/km·nm**
Zero dispersion wavelength - λ0		**1300-1324nm**
Zero dispersion slope		**< 0.90 ps/(nm^2·km)**
Cut-off Wavelength - λcc		**≤ 1250 nm**
Polarization mode dispersion	**Individual fibre**	**≤0.1 ps/√Km**
	Design link value	**≤0.06 ps/√Km**
Macro bending loss	**100 turns, 50 mm radius**	**≤0.05 dB @1310/1550 nm**
	100 turns, 60 mm radius	**≤0.05 dB @1625 nm**
Cladding diameter		**125.0 ± 0.7 µm**
Cladding non-circularity		**≤ 0.7 %**
Primary coating diameter		**190 ± 10 µm (uncoloured), 200 ± 10 µm (coloured)**
Primary coating material		**UV Cured Acrylite**
Core - Cladding concentricity error		**≤0.5 µm**
Fibre curl radius		**≥4 m**
Mode field diameter	**@1310 nm**	**9.1 ± 0.4 µm**
	@1550 nm	**10.2 ± 0.5 µm**

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Weight (kg/km)		**35.0 Kg/km (Nominal)**
Embedding strength member	**Dimension**	**3 x 0.32 mm**
	Type	**Brass Coated Steel Wire**
Moisture Barrier	**Type**	**Water Blocking Yarn & Water Swellable Tape**
Outer sheath	**Material**	**HDPE**
	Thickness	**1.3 mm (Nominal)**
	Strip marking width	**1.25 mm (Nominal)**
	Strip marking type	**HDPE Yellow**
Break load		**< 2000 N**
Tensile Strength		**12F – 680N 24F – 700N 48F – 850N @ 0.667 % fibre strain**
Crush Resistance		**2000 N**
Minimum Bending Radius	**During installation**	**20D**
	After installation	**10D**
Voltage Test	**Along power line, min vertical distance of 1.8 m**	**11 Kv**

Resistance to wind/ice

80 kph wind	**5 mm ice**
	0 kph wind
Temperature	**Installation**
	Operation
	Storage

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Standards

Applicable standard	Subject
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 60754-2:2014+A1:2020	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity
IEC 61034-2:2005+A2:2020	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 60793-1-20:2014	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
ITU G.652.D	Characteristics of a single-mode optical fibre and cable
ITU-T G.657	Characteristics of a bending-loss insensitive single-mode optical fibre and cable
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

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	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.

Part Code Table

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