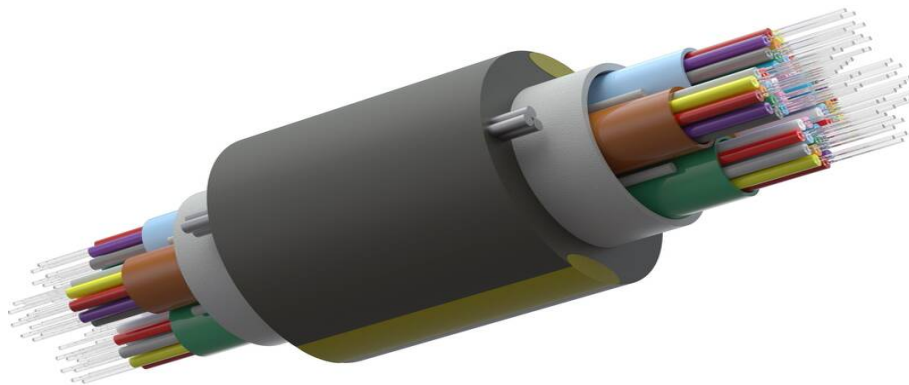


# Excel Enbeam OS2 ULW Rodent Resistant G.657.A1 Aerial Fibre Cable LT 48 Core Fca Black

Part Code: 328-048

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CIBSE TM65 Embodied Carbon: 0.233 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 48 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 48 fibre core counts.

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## Product Specifications

Feature	Values
Number of Cores	48
Type of tube	Loose tube
Number of fibres per tube	12
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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Fibre Cable LT 48 Core Fca Black

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Product drawing



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## 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.

## Fibre specifications

Features		Values
Attenuation	@1310nm	≤0.35 dB/km
	@1550nm	≤0.21 dB/km
	@1625nm	≤0.23 dB/km
Chromatic dispersion coefficient	1285nm – 1330nm	≤3.5ps/km·nm
	@1550nm	≤18.0ps/km·nm
	1565nm – 1625nm	≤22.0ps/km·nm
Zero dispersion wavelength - $\lambda_0$		1302-1324nm
Zero dispersion slope		≤0.092 ps/(km·nm <sup>2</sup> )
Cut-off Wavelength - $\lambda_{cc}$		1100-1320nm
Polarization mode dispersion	Individual fibre	≤0.1ps/√Km
	Design link value	≤0.04ps/√Km
Macro bending loss	100 turns, 50mm radius	≤0.05dB@1310/1550nm
	100 turns, 60mm radius	≤0.05dB@1625nm
Cladding diameter		125.0±0.7μm

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Cladding non-circularity		≤1.0%
Primary coating diameter		242±5µm
Primary coating material		UV Cured Acrylite
Core - Cladding concentricity error		≤0.5µm
Coating - Cladding concentricity error		≤12µm
Fibre curl radius		≥4m
Mode field diameter	@1310nm	9.2±0.4µm
	@1550 nm	10.4±0.5µm
Proof stress level		1.0% (100kpsi)

## Cable specifications

Features		Values
Weight (kg/km)	4-48 core	40.0 (nominal)
Number of fillers	4-12 core	2
	24-core	1
	36-48 core	0
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	1.6 mm (nominal)
	Strip marking width	1.25 mm (nominal)

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	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	97 kph wind	No ice
	80 kph wind	5 mm ice
	0 kph wind	10 mm ice
Temperature	Installation	-10°C to +60°C
	Operation	-30°C to +70°C
	Storage	-40°C to +70°C

## 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

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	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 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

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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

Part Code	Description
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