

✗ G.657.A1 Bend insensitive

✗ Rodent resistant

✗ Ultra-Light Weight Design

✗ 7 mm cable diamete

✗ Euroclass Fca

✗ PIA Approved

✗ CIBSE TM65 Embodied Carbon: 0.233 kg CO<sub>2</sub>e

## 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.

## 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

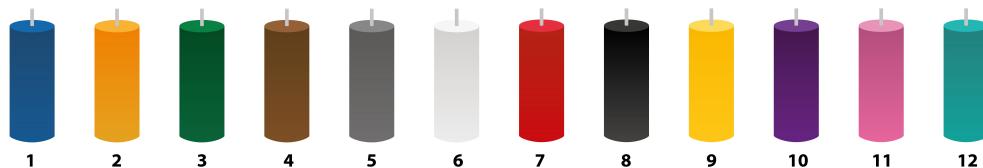
Outer diameter approx.

7 mm

**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.

## 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/Vkm
	Design link value	≤0.04ps/Vkm
Macro bending loss	100 turns, 50mm radius	≤0.05dB@1310/1550nm
	100 turns, 60mm radius	≤0.05dB@1625nm
Cladding diameter	125.0±0.7μm	
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)
	Strip marking type HDPE Yellow
Break load	1900 N
Tensile Strength	1250 N
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 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
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
328-048	Excel Enbeam OS2 ULW Rodent Resistant G.657.A1 Aerial Fibre Cable LT 48 Core Fca Black

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Contact us at [sales@excel-networking.com](mailto:sales@excel-networking.com)

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without compromise.