

# Enbeam OM4 Multimode 50/125 12 Core Fibre Optic Cable Tight Buffered Cca - Black

Item Code: 204-112

**excel**  
without compromise.



✕ Duct grade rodent resistant

✕ Cut to length service

✕ Sequentially metre marked

✕ 25 Year system warranty

✕ Euroclass Cca-s1a-d0-a1

## Product Overview

Excel OM4 50/125µm 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 900µm 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	12
Type of tube	Tight
Fibre type	Multi mode 50/125
Category	OM4
Rodent resistant	Yes
Outer sheath material	Copolymer
Outer sheath colour	Black
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

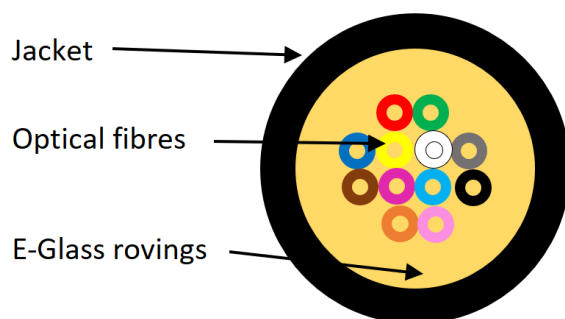
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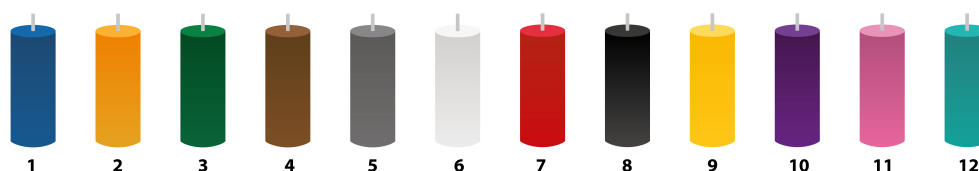


Euro class acidity according to EN 13501-6	a1
Halogen free (acc. EN 60754-1/2)	Yes
Flame retardant	In accordance with EN 50399
Low smoke (acc. BS EN 61034-2)	Yes
Outer diameter approx.	7 mm

## 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
	Diameter: 0.85±0.05mm
Strength Member	Material: E-glass Yarns
Sheath	Material: LSZH

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	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( $\leq 12$ cores), 1100N( $> 12$ cores)
	Working	400N( $\leq 12$ 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	$\geq 3500$ MHz.km
	@1300nm	$\geq 500$ MHz.km
Effective Modal Bandwidth	@850nm	$\geq 4700$ MHz.km
Core Diameter		50 $\pm$ 2.5 $\mu\text{m}$
Core Non-circularity		$\leq 5\%$

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Cladding Diameter		125.0±1.0um
Cladding Non-circularity		≤1%
Core - Cladding Concentricity Error		≤1.5um
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
IEC 60793-1-1:2017	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance

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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 50173-1:2011	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	Restriction of Hazardous Substances - Compliant

## Part Number Table

Part Number	Description
204-104	Enbeam OM4 Multimode 50/125 4 Core Fibre Optic Cable Tight Buffered Cca - Black
204-106	Enbeam OM4 Multimode 50/125 6 Core Fibre Optic Cable Tight Buffered Cca - Black
204-108	Enbeam OM4 Multimode 50/125 8 Core Fibre Optic Cable Tight Buffered Cca - Black
204-112	Enbeam OM4 Multimode 50/125 12 Core Fibre Optic Cable Tight Buffered Cca - Black

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Enbeam OM4 Multimode 50/125 16 Core Fibre Optic Cable Tight Buffered Cca - Black

204-124

Enbeam OM4 Multimode 50/125 24 Core Fibre Optic Cable Tight Buffered 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](mailto:sales@excel-networking.com)



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