

# Enbeam OM3 Multimode 50/125 16 Core Fibre Optic Cable Loose Tube Dca - Black

Item Code: 200-153

**excel**  
without compromise.



✕ Duct grade rodent resistant

✕ Cut to length service

✕ Sequentially metre marked

✕ 25 Year system warranty

✕ Euroclass Dca-s2-d0-a1

## Product Overview

Excel OM3 50/125µm loose tube 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 a gel filled (non-dripping and silicon free) tube containing up to 24 colour coded 250µm primary coated fibres. This tube is covered with an E-Glass strength member.

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	16
Type of tube	Loose tube
Number of fibres per tube	16
Fibre type	Multi mode 50/125
Category	OM3
Rodent resistant	Yes
Outer sheath material	Copolymer
Outer sheath colour	Black
Reaction-to-fire class according to EN 13501-6	Dca
Smoke development class according to EN 13501-6	s2
Euro class flaming droplets/particles according to EN	d0

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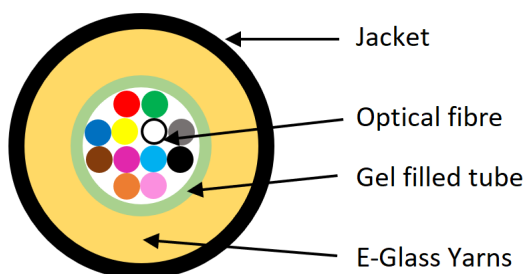
Item Code: 200-153



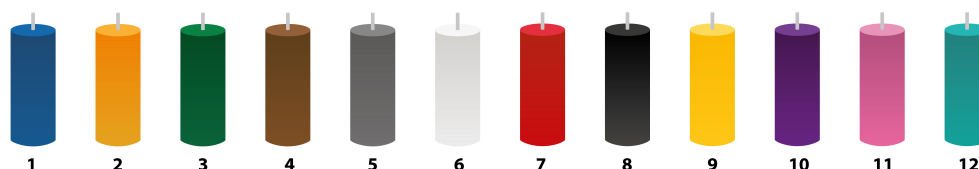
13501-6

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.	6 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
Loose Tube	Material: PBT
	Diameter: 2.8±0.1mm(2-12 cores), 3.5±0.20mm(16-24 cores)
	Thickness: 0.35±0.05mm
Strength Member	Material: E-glass Yarns

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Sheath	Material	LSZH
	Thickness	Typical 1.1mm
Cable Diameter	Diameter ( $\pm 0.3\text{mm}$ )	6.0 $\pm$ 0.20mm(2-16 cores), 6.5 $\pm$ 0.20mm(18-24 cores)
Cable Weight		Approx. 40kg/km(2-16 cores), 45kg/km(18-24 cores)
Tensile Strength	Installation	1000N
	Working	300N
Cable Impact		1J
Crush Resistance	Installation	1000N
	Working	300N
Torsion		Change of Attenuation $\leq$ 0.10dB (SM fiber)
		Change of Attenuation $\leq$ 0.30dB (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
Water Penetration		No water on free end

## 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	$\geq$ 1500 MHz.km
	@1300nm	$\geq$ 500 MHz.km
Effective modal bandwidth	@850nm	$\geq$ 2000 MHz.km
Core Diameter		50 $\pm$ 2.5 $\mu\text{m}$
Core Non-circularity		$\leq$ 5%
Cladding Diameter		125.0 $\pm$ 1.0 $\mu\text{m}$

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Cladding Non-circularity		≤1%
Core - Cladding Concentricity Error		≤1.0um
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
IEC 60793-2-10:2017	Sectional specification for A1 multimode fibres

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Item Code: 200-153



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
200-149	Enbeam OM3 Multimode 50/125 6 Core Fibre Optic Cable Loose Tube Dca - Black
200-150	Enbeam OM3 Multimode 50/125 4 Core Fibre Optic Cable Loose Tube Dca - Black
200-151	Enbeam OM3 Multimode 50/125 8 Core Fibre Optic Cable Loose Tube Dca - Black
200-152	Enbeam OM3 Multimode 50/125 12 Core Fibre Optic Cable Loose Tube Dca - Black
200-153	Enbeam OM3 Multimode 50/125 16 Core Fibre Optic Cable Loose Tube Dca - Black

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200-154

Enbeam OM3 Multimode 50/125 24 Core Fibre Optic Cable Loose Tube Dca -  
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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