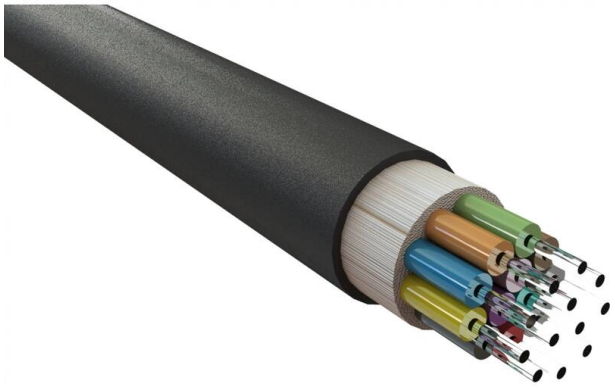
Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 16 Core 50/125 Cca Black

Item Code: 200-146



- Duct grade rodent resistant
- Cut to length service
- Sequentially metre marked
- 25 Year system warranty
- Euroclass Cca-s1a-d0-a1

Product Overview

Excel OM2 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 swellable reinforced yarns as common strength members containing up to 24 colour coded 900µm tight buffered fibres, covered with a flame retardant, low smoke zero halogen, outer sheath.

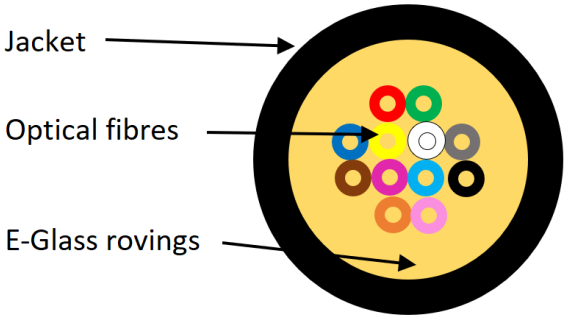
The print legend on the cable now includes information regarding the DOP number, Test and Classification of the cable for traceability.

Product Specifications

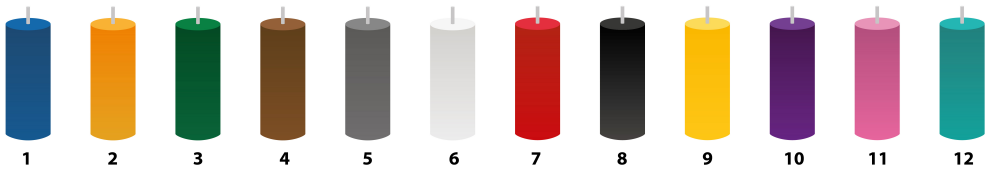
Feature	Values
Number of Cores	16
Type of tube	Tight
Fibre type	Multi mode 50/125
Category	OM2
Rodent resistant	yes
Outer sheath material	Copolymer, thermoplastic (LS0H)
Outer sheath colour	Black
Flame retardant according to IEC 60332-1-2	yes
Low smoke (acc. IEC 61034-2)	yes
Reaction-to-fire class according 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
Euro class acidity according to EN 13501-6	a1
Outer diameter approx.	8 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
	Thickness	Typical 1.1mm

Cable Diameter	Diameter (±0.3mm)	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(≤12 cores),1100N(>12 cores)
	Working	400N(≤12 cores),550N(>12 cores)
Cable Impact		1J
Crush Resistance	Installation	1000N
	Working	300N
Torsion		Change of Attenuation ≤ 0.10dB (SM fiber)
		Change of Attenuation ≤ 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

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	500 MHz.km
	@1300nm	500 MHz.km
Core Diameter		50±2.5 µm
Core Non-circularity		≤5%
Cladding Diameter		125.0±1.0 µm
Cladding Non-circularity		≤1%

Core - Cladding Concentricity Error		≤1.0 µm
Primary coating diameter - Uncolored		242±7 µm
Primary Coating Diameter - Colored		250±15 µm
Primary Coating Non-circularity		≤5%
Primary Coating – Cladding Concentricity Error		≤12 µm
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 60793-1-1:2022	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance
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 50173-1:2018	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
200-115	Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 4 Core 50/125 Cca Black
200-117	Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 6 Core 50/125

	Cca Black
200-135	Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 8 Core 50/125 Cca Black
200-145	Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 12 Core 50/125 Cca Black
200-146	Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 16 Core 50/125 Cca Black
200-147	Excel Enbeam OM2 Multimode Fibre Optic Cable Tight Buffered 24 Core 50/125 Cca Black