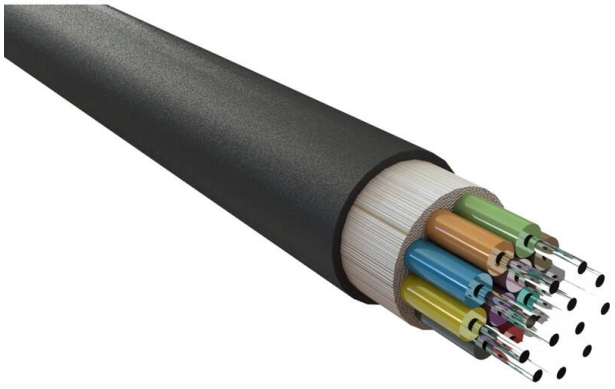
Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 12 Core 50/125 LSOH Cca Black

Item Code: 204-112



- Water resistant & UV resistant
- Duct grade - rodent resistant
- Sequentially metre marked
- Cut to length service
- Euroclass Cca-s1a-d0-a1
- 25 year system warranty
- CIBSE TM65 Embodied Carbon: 0.219 kg CO2e

Product Overview

Enbeam OM4 multimode fibre optic cable tight buffered 12 core 50/125 G.657.A2 bend insensitive LSOH Cca black, part of a huge range of OM4 fibre optic cables fully stocked at Mayflex. Excel OM4 50/125 µm tight buffered optical fibre cables have been designed specifically for internal and external applications. The cables are constructed around an E-Glass strength member containing up to 24 colour coded 900 µm tight buffered fibres, covered with a flame retardant, low smoke zero halogen, outer sheath.

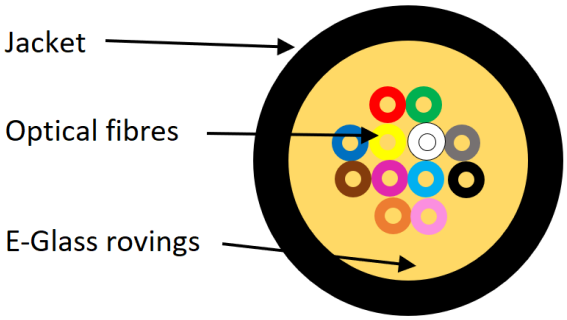
These compact, lightweight cables are extremely flexible and are quick and easy to install.

Product Specifications

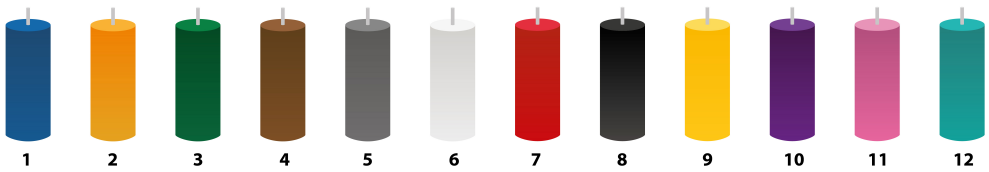
Feature	Values
Number of Cores	12
Type of tube	Tight
Fibre type	Multi mode 50/125
Category	OM4
Rodent resistant	yes
Outer sheath material	Copolymer, thermoplastic (LS0H)
Outer sheath colour	Black
Flame retardant according to IEC 60332-1-2	yes

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.	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
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	@850 nm	3.5dB/km (maximum)
@1300 nm	1.5dB/km (maximum)	
For any 1000 metre	Max. 0.1dB/km	
Overfilled modal bandwidth	@850 nm	≥3500 MHz/km
@1300 nm	≥500 MHz/km	
Effective modal bandwidth	@850 nm	≥4700 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		≤1.5 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	@850 nm	1.482
@1300 nm	1.477	
Proof stress level		≥0.7(≈1% strain) Gpa
Typical average strip force		1.7 N
Strip force (peak)		1.3 ≤ Fpeak.strip ≤8.9 N
Numerical aperture		0.200 ± 0.015
Fiber bending loss R-7.5 mm	@850 nm	≤0.2dB
@1300 nm	≤0.5dB	
Fiber bending loss R-15 mm	@850 nm	≤0.1dB
@1300 nm	≤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
204-104	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 4 Core 50/125 LSOH Cca Black
204-106	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 6 Core 50/125 LSOH Cca Black
204-108	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 8 Core 50/125 LSOH Cca Black
204-112	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 12 Core 50/125 LSOH Cca Black
204-116	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 16 Core 50/125 LSOH Cca Black
204-124	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 24 Core 50/125 LSOH Cca Black
204-124-RD	Excel Enbeam OM4 Multimode Fibre Optic Cable Tight Buffered 24 Core 50/125 LSOH Cca Red