



✗ Duct grade - rodent resistant

✗ Sequentially metre marked

✗ UV Resistant

✗ Cut to length service

✗ 25 Year system warranty

✗ Euroclass B2ca-s1a-d0-a1

✗ CIBSE TM65 Embodied Carbon: 0.709 kg CO<sub>2</sub>e

## Product Overview

Excel corrugated steel tape (CST) OM3 50/125 µm armoured loose tube optical fibre cables have been designed specifically for applications requiring a high degree of mechanical protection. These compact, lightweight cables are extremely rugged, provide rodent resistance and are quick and easy to install.

The cables are constructed around a dry tube containing up to 24 colour coded 250µm buffered fibres, which is covered with E-glass strength members. The print legend on the cable now includes information regarding the DOP number, Test and Classification of the cable for traceability.

The CST cable has also been designed for direct burial, to ensure the correct installation a sand back fill must be used at all times.

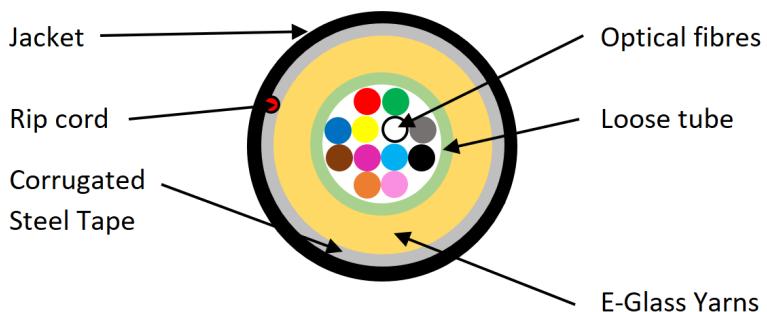
## Product Specifications

Feature	Values
Number of Cores	24
Type of tube	Loose tube
Number of fibres per tube	24
Fibre type	Multi mode 50/125
Category	OM3
Rodent resistant	yes

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Outer sheath material	Copolymer, thermoplastic (LSOH)
Outer sheath colour	Black
Flame retardant according to IEC 60332-1-2	yes
Reaction-to-fire class according to EN 13501-6	B2ca
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.	9.5 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.

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**Cable specifications**

Features	Values
Tensile Strength	2000 N
Crush Resistance	3000 N/m
Torsion	$\pm 180^\circ$
Temperature performance	Installation: -30°C to +70°C Operation: -30°C to +70°C Storage: -30°C to +70°C
Loose tubes	Number: 1 Material: PBT (Dry tube)
Loose Tube ID/OD	4-16 Cores: 2.4/3.2 $\pm$ 0.3 mm 24 Cores: 3.2/4.0 $\pm$ 0.3 mm
Peripheral Strength Member	Glass Yarn
Armoring	Thickness: 0.150 mm Material: ECCS Tape
Outer Sheath	Thickness: 1.8 mm (Nominal) Material: LSZH
Ripcord	Number: 1 Material: Polyester
Overall Cable Diameter	4-16 Cores: 9.0 $\pm$ 0.5 mm 24 Cores: 9.5 $\pm$ 0.5 mm
Cable Weight	4-16 Cores: 100.0 $\pm$ 10 kg/km 24 Cores: 115 $\pm$ 10 kg/km
Bending Radius	Short term: 20 x Diameter Long term: 10 x Diameter

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### Fibre specifications

Features	OM1	OM2	OM3	OM4
Attenuation	@850 nm	$\leq 3.0 \text{ dB/km}$	$\leq 2.7 \text{ dB/km}$	$\leq 2.7 \text{ dB/km}$
	@1300 nm	$\leq 1.0 \text{ dB/km}$	$\leq 0.8 \text{ dB/km}$	$\leq 0.8 \text{ dB/km}$
Bandwidth	@850 nm	$\geq 200 \text{ MHz.km}$	$\geq 500 \text{ MHz.km}$	$\geq 1500 \text{ MHz.km}$
	@1300 nm	$\geq 600 \text{ MHz.km}$	$\geq 550 \text{ MHz.km}$	$\geq 500 \text{ MHz.km}$
Core Diameter		$62.5 \pm 2.5 \mu\text{m}$	$50 \pm 2.5 \mu\text{m}$	$50 \pm 2.5 \mu\text{m}$
Core Cladding Concentricity Error		$\leq 1 \mu\text{m}$	$\leq 1 \mu\text{m}$	$\leq 1 \mu\text{m}$
Cladding Diameter		$125 \pm 1 \mu\text{m}$	$125 \pm 1 \mu\text{m}$	$125 \pm 1 \mu\text{m}$
Cladding Non-circularity		$\leq 1 \%$	$\leq 1 \%$	$\leq 1 \%$
Coating Diameter (Coloured)		$250 \pm 15 \mu\text{m}$	$250 \pm 15 \mu\text{m}$	$250 \pm 15 \mu\text{m}$

### 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 60754-2:2011	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

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	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
IEC 60794-1-2/F5	Generic specification - Optical fibre cable test procedures - Bending test (Method F5)
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
295-284	Excel Enbeam OM3 Multimode Armoured CST Fibre Optic Cable Loose Tube 24 Core 50/125 B2ca Black

Excel is a world class premium performing end to end infrastructure solution designed, Manufactured, supported and delivered without compromise.

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