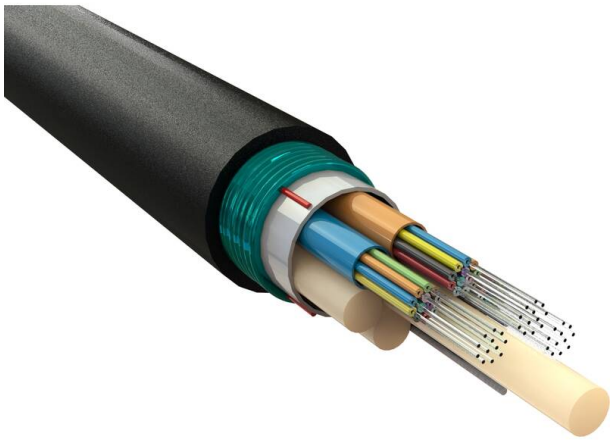
Excel Enbeam OS2 Armoured CST Fibre Optic Cable Loose Tube 48 Core Eca Blue

Item Code: 205-313



- Duct-grade, rodent resistant
- Sequentially metre marked
- UV-Resistant
- Cut to length service
- 25 Year system warranty
- Euroclass Eca
- CIBSE TM65 Embodied Carbon: 0.938 kg CO2e

Product Overview

Excel corrugated steel tape (CST) OS2 9/125 µm armoured external multi loose tube optical fibre cables have been designed specifically for applications requiring a high degree of mechanical protection. The singlemode fibre is G.652.D compliant low water peak grade and offers OS2 performance and OS1 backwards compatibility.

The cable is constructed from multiple gel filled loose tubes around a central strength member, overlaid with water blocking yarn and a water blocking tape surrounded by a corrugated steel tape and covered with a High Density Polyethylene (HDPE) outer jacket, allowing high core count fibres to be installed into the access network from 24 to 288 fibre core counts.

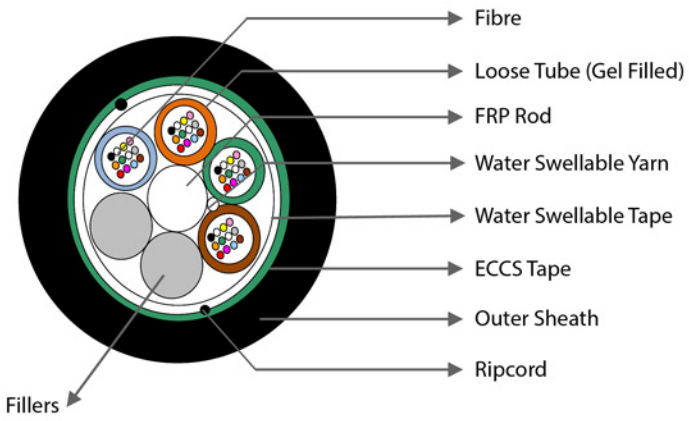
The CST cable has also been designed for direct burial, to ensure the correct installation a sand back fill must be used at all times.

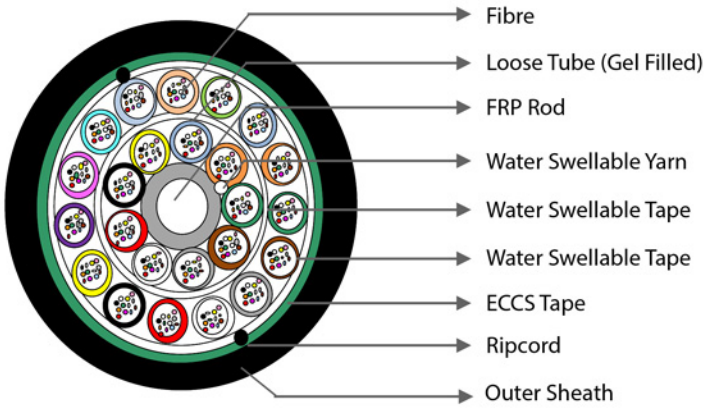
Product Specifications

Feature	Values
Number of Cores	48
Type of tube	Loose tube
Number of fibres per tube	12
Fibre type	Single mode 9/125
Category	OS2
Rodent resistant	yes

Outer sheath colour	Blue
Reaction-to-fire class according to EN 13501-6	Eca
Outer diameter approx.	11.5 mm

Product drawing





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
Cable weight (kg/km)	24-core	110.0 ± 15
	48-core	125.0 ± 15
	72-core	125.0 ± 15
	96-core	150.0 ± 15
	144-core	225.0 ± 15
	288-core	280.0 ± 25
Tensile Strength	24-core	2670 N
	48-core	2000 N
	72-core	2000 N
	96-core	2670 N
	144-core	3500 N
	288-core	2700 N
Crush Resistance		2000 N
Impact		15 N m
Torsion		± 180 º
Temperature performance	Installation	-20ºC to +70ºC
	Operation	-20ºC to +70ºC
	Storage	-20ºC to +70ºC
Loose tube	Material	PBT
Loose Tube ID/OD	24-core	1.2/1.9 ± 0.1 mm
	48-core	1.5/2.2 ± 0.1 mm

	72-core	1.5/2.2 ± 0.1 mm
	96-core	1.6/2.2 ± 0.1 mm
	144-core	1.5/2.2 ± 0.1 mm
	288-core	1.6/2.2 ± 0.1 mm
Central strength member dimensions	24-core	2.0 ± 0.1 mm
	48-core	2.3 ± 0.1 mm
	72-core	2.3 ± 0.1 mm
	96-core	2.5 ± 0.1 mm
	144-core	3.5 ± 0.1 mm
	288-core	3.0 ± 0.1 mm
Central strength member type	Type	FRP Rod
Moisture barrier		Water Swellable Yarn
Core wrapping		Water Swellable Yarn
Armoring	Material	ECCS Tape
Outer Sheath	Thickness	1.5 mm (Nominal)
	Material	HDPE
Ripcord	Number	2
	Material	Polyester
Bending Radius	During installation	20D
	After installation	10D

Fibre specifications

Features		Values
Attenuation	@1310 nm	≤ 0.36 dB/km
	@1550 nm	≤ 0.23 dB/km
Chromatic Dispersion	1285 - 1330 nm	≤ 3.5 ps/nm.km
	1550 nm	≤ 18 ps/nm.km
Zero Dispersion Wavelength		1300 - 1324 nm
Zero Dispersion Slope		≤ 0.092 ps/nm2.km
Polarisation Mode Dispersion		≤ 0.2 ps/√km
Cut-off Wavelength		≤ 1260 nm

Mode Field Diameter	@1310 nm	9.2 ± 0.4 µm
	@1550 nm	10.4 ± 0.5 µm
Core Cladding Concentricity Error	24-144 núcleos	≤ 0.6 µm
	288 núcleos	≤ 0.5 µm
Cladding Diameter		125 ± 0.7 µm
Cladding Non-circularity		≤ 0.7 %
Coating Diameter (Uncoloured)	24-144 núcleos	245 ± 5 µm
	288 núcleos	245 ± 10 µm

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 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

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