Enbeam OS2 Singlemode 9/125 12 Core Fibre Optic Cable Loose Tube Dca - Black

Item Code: 205-302

- Duct grade rodent resistant
- Cut to length service
- Sequentially metre marked
- 25 Year system warranty
- Euroclass Dca-s2-d0-a1

Product Overview

Excel OS2 9/125?m loose tube optical fibre cables have been designed specifically for internal and external applications. The singlemode fibre is G.652.D compliant low water peak grade and offers OS2 performance and OS1 backwards compatibility. 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 250?m primary coated fibres. This tube is covered with an E-Glass strength member.

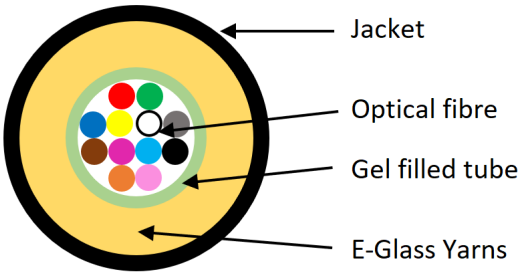
The print legend on the cable now includes information regarding the DOP number, Test and Classification of the cable for traceability.

Product Specifications

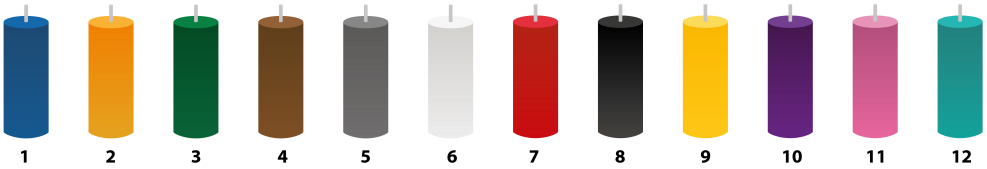
Feature	Values
Number of Cores	12
Type of tube	Loose tube
Number of fibres per tube	12
Fibre type	Single mode 9/125
Category	OS2
Outer sheath material	Copolymer
Outer sheath colour	Black
Reaction-to-fire class according to EN 13501-6	Dca
Smoke development class according to EN 13501-6	s2
Euro class flaming droplets/particles according to EN 13501-6	d0

Euro class acidity according to EN 13501-6	a1
Flame retardant	In accordance with EN 50399
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
Sheath	Material	LSZH
	Thickness	Typical 1.1mm
Cable Diameter	Diameter (±0.3mm)	6.0±0.20mm(2-16 cores),

		6.5±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 ≤ 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
Water Penetration		No water on free end

Fibre specifications

Features		Values
Attenuation	@1310nm	0.39 dB/km(Maximum)
	@1550nm	0.25dB/km(Maximum)
	For any 1000 metre	Max. 0.1dB/km
Reflex Index	@1310nm	1.467
	@1550nm	1.468
Cladding Diameter		125.0±0.7um
Cladding Non-circularity		≤1%
Core – Cladding Concentricity Error		≤0.6um
Primary Coating Diameter		242±7um
Primary Coating Non-circularity		≤5%
Primary Coating – Cladding Concentricity Error		≤12um

Chromatic Dispersion Coefficient	In 1285-1330nm	≤3.4ps/km·nm
	@1550nm	≤18.0ps/km·nm
	@1625nm	≤22.0ps/km·nm
Zero Dispersion Wavelength, λ0		1300-1324nm
Zero Dispersion Slope		≤0.092 ps/(km·nm2)
Cut-off Wavelength, λcc		≤1260nm
Mode Field Diameter	@1310nm	9.0±0.5um
	@1550nm	10.4±0.5um
Macro Bending Loss(100 turns)	25mm mandrel	≤0.05dB@1310nm&1550nm
	30mm mandrel	≤0.05dB@1625nm
PMD Coefficient, Max. Uncabled		≤0.5ps/√km
PMDQ Link Design Value		≤0.2ps/√km
Proof Stress Level		≥0.69 Gpa(≈1% strain)
Fibre Curl Radius		4m
Stripe Force(peak)		1.3≤Fpeak.strip≤8.9N
Dynamic Fatigue Resistance Aged and Unaged		≥20
Static Fatigue Resistance		≥23

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 60793-1-1:2017	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance
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
ITU G.652.D	Characteristics of a single-mode optical fibre and cable
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
205-302	EXCEL OS2 12C 9/125 LOOSE TUBE BLACK Dca