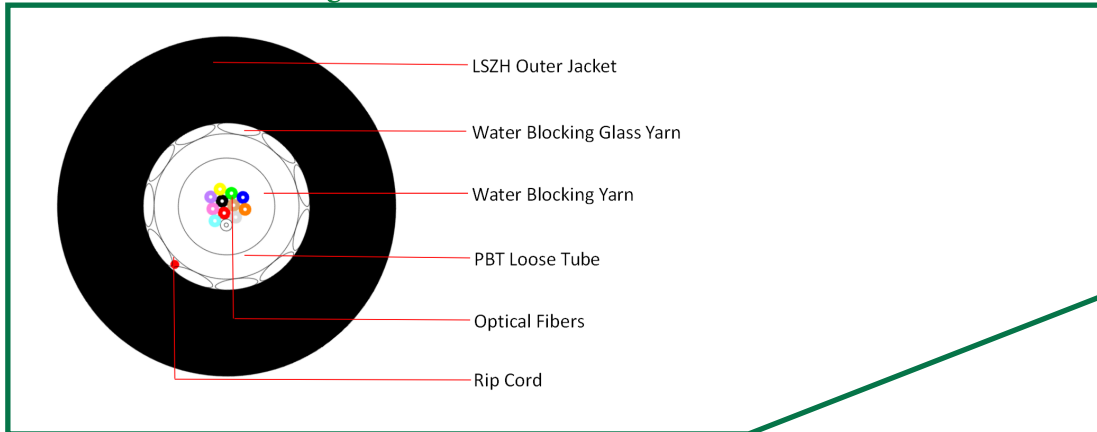


Indoor/Outdoor Dielectric Armored Fiber Optic Cable

Product Structure Diagram



OS2 Single Mode Indoor/Outdoor Dielectric Armored Fiber Optic Cable

Central Loose Tube Structure

Cable Construction: Central Loose Tube

Product Overview

PLANET OS2 Single Mode Dielectric Armored Fiber Optic Cable is designed for indoor/outdoor backbone applications requiring high mechanical protection and reliable long-distance transmission. The cable features a fully dielectric Central Loose Tube (PBT) construction with glass yarn reinforcement, water-blocking protection, and LSZH UV-resistant jacket, providing excellent resistance against moisture, mechanical stress, and environmental conditions.

Suitable for:

- Telecom Backbone Networks
- FTTX Applications
- Campus Networks
- Building Backbone Cabling
- Indoor/Outdoor Transition Installations

Key Features

- OS2 Single Mode Fiber (ITU-T G.652.D)
- Available Fiber Counts: 2 / 4 / 6 / 8 / 12 / 24 Fibers
- Central Loose Tube (PBT) Structure
- Dielectric Glass Yarn Strength Member
- Metal-Free Construction
- Water Blocking Design
- Flame Retardant LSZH UV-Resistant Outer Jacket
- Indoor / Outdoor Installation
- Operating Temperature: -40°C to +70°C
- Maximum Tensile Strength: 1000 N

Technical Specifications:

Parameter	Specification
Fiber Type	OS2 Single Mode Fiber (ITU-T G.652.D)
Fiber Count	2 / 4 / 6 / 8 / 12 / 24 Fibers
Fiber Performance	≤0.35 dB/km @1310 nm / ≤0.25 dB/km @1550 nm
Operating Wavelength	1310 nm / 1550 nm
Construction	Central Loose Tube
Tube Material	PBT
Strength Member	Dielectric Glass Yarn
Armor	Dielectric Glass Yarn Reinforcement
Jacket Material	LSZH UV-Resistant Black Jacket
Cable Diameter	Approx. 6.6–7.0 mm (Depending on Fiber Count)
Cable Weight	Approx. 50–80 kg/km (Depending on Fiber Count)
Maximum Tensile Strength	1000 N
Crush Resistance	IEC 60794 Compliant
Operating Temperature	-40°C to +70°C
Installation Temperature	-10°C to +60°C
Minimum Bending Radius	10D Static / 20D Dynamic

Standards & Compliance:

- ITU-T G.652.D
- IEC 60794-1-2 Fiber Optic Cable Standard
- IEC 60793-2-50 Optical Fiber Standard
- IEC 60332-1-2 Flame Propagation Test
- ISO/IEC 11801
- ANSI/TIA-568.3-D
- RoHS Compliant
- REACH Compliant

Ordering Information:

Model	Description
PL-FOS2CUTA-02	2 Fiber OS2 Single Mode Central Loose Tube Dielectric Armored Indoor/Outdoor Cable
PL-FOS2CUTA-04	4 Fiber OS2 Single Mode Central Loose Tube Dielectric Armored Indoor/Outdoor Cable
PL-FOS2CUTA-06	6 Fiber OS2 Single Mode Central Loose Tube Dielectric Armored Indoor/Outdoor Cable
PL-FOS2CUTA-08	8 Fiber OS2 Single Mode Central Loose Tube Dielectric Armored Indoor/Outdoor Cable
PL-FOS2CUTA-12	12 Fiber OS2 Single Mode Central Loose Tube Dielectric Armored Indoor/Outdoor Cable
PL-FOS2CUTA-24	24 Fiber OS2 Single Mode Central Loose Tube Dielectric Armored Indoor/Outdoor Cable

Note

This datasheet represents the standard construction and performance requirements of PLANET Structured Cabling Systems. Actual product specifications may vary according to fiber count and manufacturing configuration.

2. TECHNICAL SPECIFICATION

2.1 TECHNICAL SPECIFICATION:

Fiber Count		2 ~ 12Fo	24Fo
Loose Tube	Number	1	
	Material	PBT	
	Diameter	2.4 mm ±0.2mm	2.8 mm ±0.2mm
Fiber Counts Per Tube		2 ~ 12	24
Strength Member	Material	Glass Yarn	
	Number	600D	
Outer Jacket	Material	LSZH	
	Color	Black	
	Thickness	1.5mm (Nominal)	
Cable Diameter		6.6mm±0.3mm	7.0mm±0.3mm
Net weight		50kg/km±10%	55kg/km±10%
Max.Tensile Strength		1000 N	
Static Bending Radius		10 D/mm	10 D/mm
Dynamic Bending Radius		20 D/mm	20 D/mm

2.2 TEMPERATURE RANGE:

Operating temperature	- 40°C~+70°C
Store/Transport temperature	- 40°C~+70°C
Installation temperature	- 10°C~+60°C

3. OPTICAL FIBER:

The Optical and Geometrical Performance of Single Mode Fiber (ITU -T G.652D)

ITEMS	UNITS	SPECIFICATION
Fiber Type	-	G652D
Attenuation	dB/km	1310nm $\leq$ 0.36 1550nm $\leq$ 0.22
Chromatic Dispersion	ps/nm.km	1310nm $\leq$ 3.5 1550nm $\leq$ 18 1625nm $\leq$ 22
Zero Dispersion Slope	ps/nm ² .km	0.093
Zero Dispersion Wavelength	nm	1300 ~ 1324
PMD (M=20, Q=0.01%)	ps/ $\sqrt$ km	$\leq$ 0.2
Cut-off Wavelength (λ_{cc})	nm	$\leq$ 1260
Attenuation vs. Bending (60mm x100turns)	dB	$\leq$ 0.1 at 1625nm
Mode Field Diameter@1310nm	μ m	9.2 $\pm$ 0.4
Core-Clad Concentricity	μ m	$\leq$ 0.6
Cladding Diameter	μ m	125 $\pm$ 1
Cladding Non-circularity	%	$\leq$ 0.8
Coating Diameter	μ m	245 $\pm$ 10
Proof Test	Gpa	$\geq$ 0.70
Temperature Dependence	dB	$\leq$ 0.5 (-60°C to +85°C)

4. Mechanical and Environmental Performance of the Cable

All mechanical and environmental tests are performed according to IEC 60794 requirements.
Flame test performance is applicable to LSZH Flame Retardant Jacket Version.

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test	#Test method: IEC 60794-1-E1 -. load: 1000 N -. Cable length: ≥ 50 m	-. Attenuation increment @1550nm : ≤ 0.1 dB -. No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test method: IEC 60794-1-E3 -.Long-term load: 200 N/100mm -.Short load: 600 N/100mm Load time: 1 minutes	-. Attenuation increment @1550nm : ≤ 0.1 dB -. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method: IEC 60794-1-E4 -.Impact height: 1 m -.Impact weight: 450 g -.Impact point: ≥ 5 -.Impact frequency: ≥ 1 /point	-. Attenuation increment @1550nm : ≤ 0.1 dB -. No jacket cracking and fiber breakage
4	Repeated Bending Test	#Test method: IEC 60794-1-E6 -.Mandrel diameter: 20 D -.Subject weight: 15 Kg -.Bending frequency: 30 times -.Bending speed: 2sec/cycle	-. Attenuation increment @1550nm : ≤ 0.1 dB -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method: IEC 60794-1-E7 -.Length: 1m -.Subject Weight: 15kg -.Angle: ± 180 degree -.Frequency: ≥ 10 /point	-. Attenuation increment @1550nm : ≤ 0.1 dB -. No jacket cracking and fiber breakage

6	Water Penetration Test	#Test method: IEC 60794-1-F5B -.Height of pressure head: 1 m -.Length of specimen: 3 m -.Test time: 24 hours	-. No leakage through the open cable end
7	Temperature Cycling Test	#Test method: IEC 60794-1-F1 -.Temperature steps: + 20°C、 - 40°C、 + 70°C、 + 20°C -.Testing Time: 12 hours/step -.Cycle index: 2	-. Attenuation increment @1550nm : ≤ 0.1 dB -. No jacket cracking and fiber breakage
8	Drop Performance	#Test method: IEC 60794-1-E14 -.Testing length: 30cm -.Temperature range: 70 $\pm$ 2°C -.Testing Time: 24hours	-.No filling compound drop out
9	Cable Burning Test	#Test method: IEC 60332-1-2 -.Test Method:The Length 175mm Flames Jet Toward The Cable at an Angle of 45° -.Specimen Length: 60 cm -.Testing Time: 1Minutes	-. The distance between the top of the charred part and the lower part of the fixed end shall not exceed 50mm