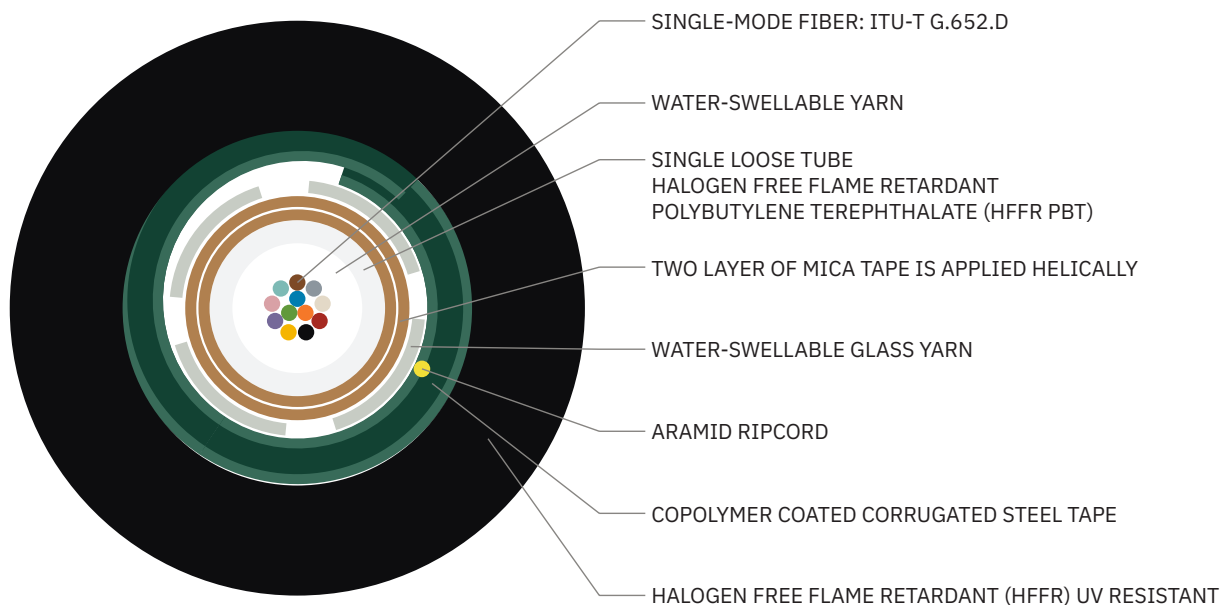


OS2-CST-B2CA-48-FR

SINGLE LOOSE TUBE, CORRUGATED STEEL TAPE ARMOR, HALOGEN-FREE JACKET, FIRE RESISTANT, FIBER OPTIC CABLE

FIBER OPTIC CABLE DRAWING

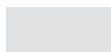


FIBER OPTIC CABLE TUBE AND FIBER CORE COLORS

Tube Color Scheme

1

Natural



FIBER OPTIC CORE COLOR SCHEME

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

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CHARACTERISTICS

Optical Fiber Core and Tube Color Standard	ANSI/TIA 598-D Color Coding
Reaction to Fire	B2ca -s1a, d1, a1
Optical Fiber Type	G.652.D
Optical Fiber Dimensions	9/125/245/260 µm
Optical Fiber Count	48
Optical fiber identification method	Colored
Cable Type	Single Loose Tube
Tube Material	Halogen Free Flame Retardant Polybutylene Terephthalate (HFFR PBT)
Tube Diameter (mm)	2,8
Tube Filling Compound Material	Water-swellaable Yarn
Active Tube Count	1
Single Loose Tube Tube Color	Natural
Tensile Strength	1200 N
Dielectric Tensile Strength Member	Water-swellaable Glass Yarn
Fire Barrier Material	Two layer of mica tape is applied helically
Armor Material	Copolymer coated corrugated steel tape
Armor Thickness	255 µm
Jacket Strip Method	1 Aramid Ripcord
Jacket Material	Halogen Free Flame Retardant (HFFR) UV resistant
Jacket Color	Black
Jacket Wall Thickness	1,8 mm
Outer Jacket Marking Method	Inkjet marking
Outer Jacket Marking Area	One side
Outer Jacket Marking Application	Applied in one meter intervals
Nominal Cable Diameter (mm)	9
Net Cable Weight (kg/km)	115
Reel Length	2000 meters %±5

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MECHANICAL CHARACTERISTICS (CABLED)

Test	Reference Standard	Specified Value
Maximum Tensile Strength	IEC 60794-1-21-E1	≥ 1200 N
Crush Resistance	IEC 60794-1-21-E3	2000 N/100 mm (15 minutes)
Circuit Integrity	IEC 60331-25	FE180
Circuit Integrity with Shock	EN 50200	PH120
Smoke Density	IEC 61034-2	
Corrosive Gas	IEC 60754-2	
Halogen-Free	IEC 60754-1	
Flame Retardancy	IEC 60332-1-2	

CHEMICAL CHARACTERISTICS

RoHS	Free of hazardous substances according to RoHS regulation
REACH	Safe to use according to REACH regulation

TEMPERATURE RANGE (CABLED)

Transportation	-40 °C to 70 °C
Storage	-40 °C to 70 °C
Installation	-30 °C to 60 °C
Operation	-40 °C to 70 °C

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Low water peak single-mode optical fiber, made by the vapor phase axial deposition (VAD) method, which enables customer to construct high performance wired network for voice, video and/or data transmission. The fiber, made of a germanium doped silica core and a silica cladding, is in compliance with ITU-T G.652 A, B, C and D.

FIBER MATERIALS

Core Material	Silica (SiO ₂) Doped with Germanium Dioxide (GeO ₂)
Cladding Material	Pure silica (SiO ₂)
Coating Material	Dual layers of UV-cured acrylate

DIMENSIONS

Mode Field Diameter	at 1310 nm	9.2 ± 0.4 μm
	at 1550 nm	10.3 ± 0.5 μm
Cladding Diameter	125.0 ± 0.5 μm	
Coating Diameter (Uncolored)	245 ± 5 μm	
Core/Cladding Concentricity Error	≤ 0.4 μm	
Cladding Non-circularity	≤ 0.5 %	
Coating - Cladding Concentricity Error	≤ 12 μm	
Fiber Curl Radius	≥ 4.0 m	

OPTICAL CHARACTERISTICS

Attenuation Coefficient	at 1310 nm	≤ 0.334 dB/km
	at 1383 nm	≤ 0.314 dB/km ¹
	at 1550 nm	≤ 0.194 dB/km
	at 1625 nm	≤ 0.224 dB/km
Point Discontinuity	at 1310 nm / 1550 nm	≤ 0.05 dB
Cable Cut-off Wavelength (λ _{cc})	< 1260 nm	
Zero-dispersion Wavelength (λ ₀)	1300nm ≤ λ ₀ ≤ 1324 nm	
Zero-dispersion Slope (S ₀)	≤ 0.09 ps/(nm ² ·km)	
Chromatic Dispersion Coefficient	at 1310 nm	≤ 3.5 ps/(nm·km)
	at 1550 nm	≤ 17 ps/(nm·km)
	at 1625 nm	≤ 22 ps/(nm·km)
Maximum Individual Fiber PMD	≤ 0.2 ps/√km	
Fiber PMD Link Design Value	≤ 0.08 ps/√km	

1. ATTENUATION INCREASE DUE TO HYDROGEN AGING AT THIS WAVELENGTH WILL BE 0.01 DB/KM OR LESS IN ACCORDANCE WITH IEC IEC60793-2-50 TEST PROCEDURE.

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MECHANICAL CHARACTERISTICS

Proof Stress Level	0.86 GPa (1.2%, 120 kpsi)	
Bending Induced Attenuation	Ø=32 mm, 1 turn at 1550 nm	≤ 0.05 dB
	Ø=50 mm, 100 turns at 1310 nm	
	Ø=50 mm, 100 turns at 1550 nm	
	Ø=60 mm, 100 turns at 1625 nm	
Coating Strip Force (F)	peak	1.3 N ≤ F ≤ 8.9 N
	average	1.0 N ≤ F ≤ 5.0 N
Dynamic Tensile Strength	median; 0.5 m, unaged	≥3.8 Gpa (550 kpsi)
	median; 0.5 m, aged	≥3.0 Gpa (440 kpsi)
Fatigue	nominal value	20

ENVIRONMENTAL CHARACTERISTICS ²

Temperature Cycling	-60 °C to 85 °C	≤ 0.05 dB/km
Temperature Humidity Cycling	-10 °C to 85 °C at 85% R. H.	
Water Immersion	at 23 °C ± 2 °C	
Heat Aging	at 85 °C ± 2 °C	
Damp Heat	85 °C at 85% R. H.	

PERFORMANCE CHARACTERISTICS

Effective Group Index of Refraction N_{eff}	at 1310 nm / 1383 nm	1.466
	at 1550 nm	1.467
	at 1625 nm	1.470

2. INDUCED ATTENUATION AT 1310 NM, 1550 NM AND 1625 NM
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