CTSF – OUTDOOR SELF SUPPORTING OVAL FLAT DROP CABLE

Overview

Connect Fiber's Oval Flat Drop Cable Technology features an all dielectric construction of Black MDPE with Fiber Reinforced Plastic (FRP) strength rods incorporated into the sheath wall for self supporting applications making the cable suitable for installation in duct, buried and aerial applications. The cable is 100% Dielectric and very easy to install. The manufacturing processes utilized high quality raw materials that guarantee the cable to be able to withstand the typical service condition for a period of twenty-five (25) years without detriment to the operation characteristics of the cable. Stable quality control system is ensured products through several programs including ISO 9001, ISO 14001 and OHS.

Features

- ITU-T G.652.D rated fiber with improved attenuation and bend performance as well as compatibility with standard single-mode.
- Meets the Telcordia GR-20 and RDUP/RUS requirements.
- High quality raw material guarantees long service life of cable.
- Stable quality control through ISO 9001, ISO 14001 and OHS programs.

Ordering Information

Fiber Count	Part Number	Description
2	CTSF-002-FDC-D	2 Fiber Loose Tube, 8.1 x 4.5mm, Black PE UV Resistant Jacket, 250um Single Mode, G.652D, Dielectric
6	CTSF-006-FDC-D	6 Fiber Loose Tube, 8.1 x 4.5mm, Black PE UV Resistant Jacket, 250um Single Mode, G.652D, Dielectric
12	CTSF-012-FDC-D	12 Fiber Loose Tube, 8.1 x 4.5mm, Black PE UV Resistant Jacket, 250um Single Mode, G.652D, Dielectric
24	CTSF-024-FDC-D	24 Fiber Loose Tube, 8.1 x 4.5mm, Black PE UV Resistant Jacket, 250um Single Mode, G.652D, Dielectric

Standards

Cable Description

- G.652D SM-fibers: 2/6/12/24
- Suitable for direct buried, duct or aerial installation.

Design and Test Criteria

Optical fibers are housed in loose tubes that are made of high-modulus plastic and filled with waterproof compounds. FRP is applied as strength member. Water blocking yarns are used in and over the cable core to prevent it from water ingress. polyethylene sheath are applied as outer sheath.

- ITU-T G.652D Characteristics of a single-mode optical fiber
- GR-20 Generic Requirements for Optical Fiber and Optical Fiber Cable
- ANSI_ICEA-S-87-640 Standard for optical fiber outside plant communications cable

Working Conditions

- Operation temperature: -40 °C to 70 °C
- Installation temperature: -10 °C to 60 °C
- Storage temperature: -40 °C to 70 °C

Minimum Allowable Bending Radius

- Static: 10D (D: is the out diameter of the cable)
- Dynamic: 20D (D: is the out diameter of the cable)

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Specifications

Optical properties of the SM fiber are achieved through a germanium doped silica based core with a pure silica cladding which meets ITU-T G652D, UV curable acrylate protective coating is applied over the glass cladding to provide the necessary maximum fiber lifetime. Geometrical, optical, and mechanical characteristics of fiber in cable as the following table:

Category	Description	Specification	
		Before cable	After cable
Geometrical Characteristics	Cladding diameter	125.0 ± 1.0 µm	
	Cladding non-circularity	≤ 1.0 %	
	Core concentricity error	≤ 0.6µm	
	Fiber diameter	245± 7 µm (UV coating) 250 ± 15 µm (Colored)	
	Coating/cladding concentricity error	≤ 12µm	
Optical Characteristics	Mode field diameter at 1310 nm	9.2 ± 0.4 µm	
	Mode field diameter at 1550 nm	10.4 ± 0.5 µm	
	Attenuation at 1310 nm	≤ 0.36 dB/km	
	Attenuation at 1383 nm	≤ 0.36 dB/km	
	Attenuation at 1550 nm	≤ 0.22 dB/km	
	Zero dispersion wavelength	1300 ± 12 nm	
	Zero dispersion slope	≤ 0.091 ps/(nm2·km)	
	Cable cut-off wavelength	≤ 1260 nm	
	Polarization mode dispersion design link value (M=20, Q=0.01%)	≤ 0.1 ps/√km	
	Macro-bend loss (10 turns, 30mm radius, 1550nm)	≤ 0.25 dB	
Mechanical Specifications	Tensile performance	1350N	
	Crush	1500N/100mm	

Dimensions and Descriptions of Cable Construction

Item	Details	Fiber Count			
		2F	6F	12F	24F
Loose tube	Number	1			
	Outer diameter (mm)	3.0			
Fiber counts per tube (G652D)		2 Fibers	6 Fibers	12 Fibers	24 Fibers
Cable diameter (mm)		8.1 x 4.5 (±0.3)			
Cable weight(kg/km) Approx.		35			
Strength member	Material	FRP			
	Diameter (mm)	1.6			
	number	2			
Water Blocking Material	Material	Water Blocking Yarn			
	number	2			
Sheath	Material	PE			
	Colour	Black			
	Thickness (mm)	Nominal 0.8			

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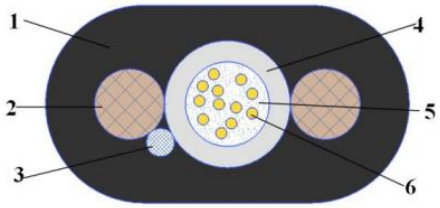
Cable Construction

Cross Section View



1. PE sheath 2.Non-metallic strength member 3. Water blocking material
4.Loose tube 5.Tube filling 6.Optical fiber

Colour Coding of the Fiber Jackets

Individual Fiber Jackets

The color code fiber identification shall be in accordance with the standard TIA 598 color sequence.

Fiber jacket colour coding	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Slate	White
	7	8	9	10	11	12
	Red	Black	Yellow	Purple	Pink	Aqua
	13	14	15	16	17	18
	Blue with black ring	Orange with black ring	Green with black ring	Brown with black ring	Slate with black ring	White with black ring
	19	20	21	22	23	24
	Red with black ring	Natural	Yellow with black ring	Purple with black ring	Pink with black ring	Aqua with black ring

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