



Unitube Light-armored Ribbon Fiber Cable GYDXTW-288CORE

Material Description

Version 4.0

2020

1 Cable Description

The ribbon 12 fibers, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. The tube is wrapped with a layer of PSP longitudinally. Between the PSP and the loose tube water-blocking material is applied to keep the cable compact and watertight. Two parallel steel wires are placed at the two sides of the steel tape. The cable is completed with a polyethylene (PE) sheath.

2 Reference Standard

IEC 60793-1, 60793-2, 60794-1

ITU-T G652, G657

3 Optical and mechanical characteristics of fiber

MFD (1310nm)	9.2 μm ±0.4 μm
MFD (1550nm)	10.4 μm ±0.5 μm
Cladding diameter	125 μm ±0.7 μm
Fiber diameter	250 ± 15 μm (Colored)
Core/cladding concentricity error	≤0.5 μm
MFD concentricity error	≤0.8 μm
Cladding non circularity	≤1.0%
Cut off wavelength	≤1260nm
Attenuation coefficient	1310nm: ≤0.35dB/km
	1550nm: ≤0.21dB/km
Bending-loss performance of optical fiber	≤0.05dB
Polarization mode dispersion	≤0.1ps/ $\sqrt{\text{km}}$
Zero-dispersion wavelength	1300 – 1324 nm
Zero-dispersion slope	≤0.092ps/(nm ² •km)

4 Characteristics

- Good mechanical and temperature performance
- High strength loose tube that is hydrolysis resistant
- Special tube filling compound ensure a critical protection of fiber
- Crush resistance and flexibility
- PSP enhancing moisture-proof
- Two parallel steel wires ensure tensile strength
- Use COOFC(DG) 12 fiber ribbon, flexible used.
- Small diameter, light weight and friendly installation
- Long delivery length

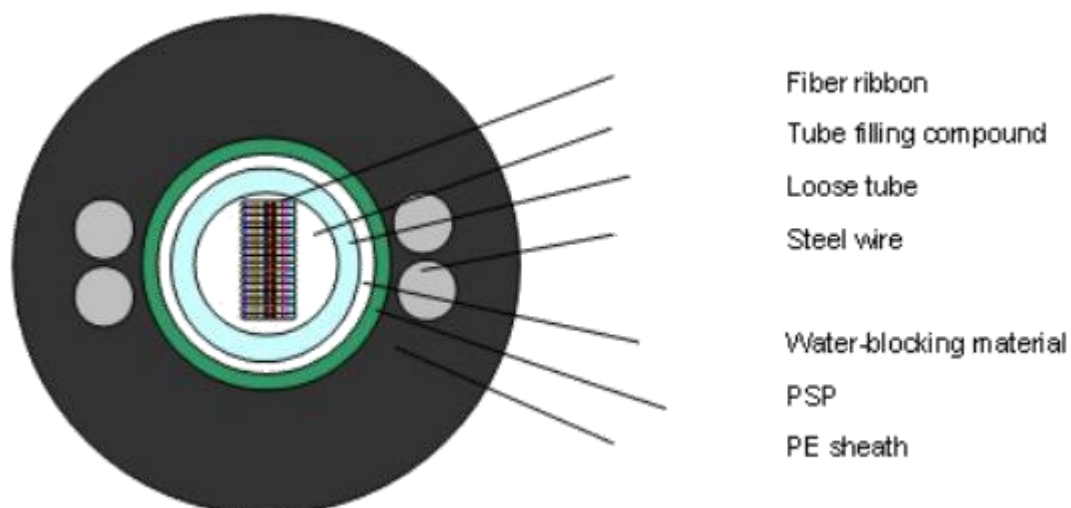
5 Mechanical requirements and methods of fiber cable

Tensile strength	MAT, Conform to IEC 60794-1-E1, while fiber strain is $\leq 0.33\%$
Crush	1000N/100mm, conform to IEC 60794-1-E3
Impact	Conform to IEC 60794-1-E4
Repeated bending	Conform to IEC 60794-1-E6
Torsion	2 turns at 180 degrees, conform to IEC 60794-1-E7
Flexing	Conform to IEC 60794-1-E8
Kink	Conform to IEC 60794-1-E10
Cable bend	Conform to IEC 60794-1-E11
Vibration	Conform to IEC 60794-1
Water penetration	1m water, 24 hours, conform to IEC 60794-1-F5B
The dielectric strength of outer jacket	Conform to ITU-T Rec.K25
Abrasion	Conform to IEC 60794-1-E2
Temperature cycling test	-40°C~+70°C, Conform to IEC 60794-1-F1

6 Fiber color coding and Tube color coding

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

7 Structure



8 Optical characteristics

		G.652	G.655	50/125 μm	62.5/125 μm
Attenuation (+20°C)	@ 850 nm			≤ 3.0 dB/km	≤ 3.0 dB/km
	@1300 nm			≤ 1.0 dB/km	≤ 1.0 dB/km
	@1310 nm	≤ 0.36 dB/km	≤ 0.40 dB/km		
	@1550 nm	≤ 0.22 dB/km	≤ 0.23 dB/km		
Bandwidth (Class A)	@ 850 nm			≥ 500 MHz·km	≥ 200 MHz·km
	@1300 nm			≥ 1000 MHz·km	≥ 600 MHz·km
Numerical Aperture				0.200 ± 0.015 NA	0.275 ± 0.015 NA
Cable Cut-off Wavelength λ_{cc}		≤ 1260 nm	≤ 1450 nm		

9 Technical parameters

Cable Type	Fiber number within one Count	Cable Diameter mm	Cable Weight kg/km	Tensile Strength Long/Short Term N	Crush Resistance Long/Short Term N/100mm	Bending Radius Static/Dynamic mm
GYDXTW-12-72F	12	14.2	206	600/1500~3000	300/1000	10D/20D
GYDXTW-84~96F	12	14.8	219	600/1500~3000	300/1000	10D/20D
GYDXTW-108~144F	12	16.0	250	600/1500~3000	300/1000	10D/20D
GYDXTW-156~288F	12	19.5	318	600/1500~3000	300/1000	10D/20D

Storage/Operating Temperature: -40°C to +80°C

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