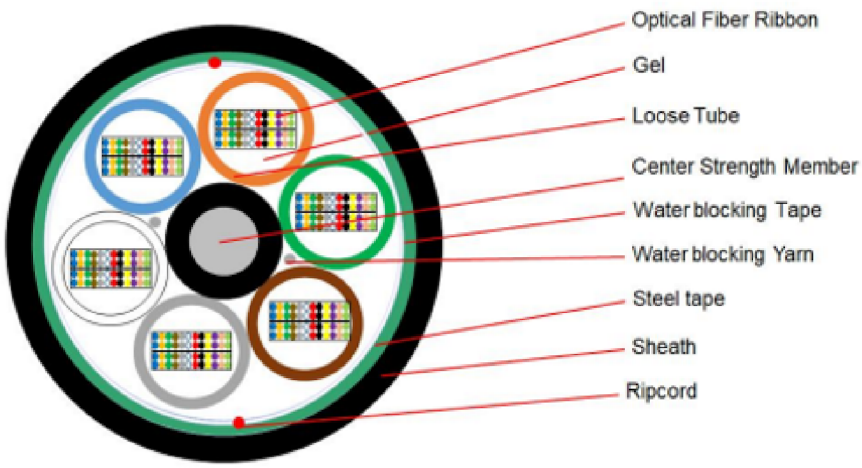
Optical Fiber Ribbon Cable GYFDTS 144/288 Core

Structure:



Applications:

- External cable distribution
- Interconnection networks
- Steel tape, 4-5-7 km reel, G652.D standard



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Specifications

1. Construction of the cable

Items		Specification	
Fiber Type		G.652D	
Fiber Count		144	288
Fiber Ribbon		12 Fiber	
Cable Core Structure		1 + 6	
Loose Tube	Fiber/Tube	48	
	Number of Loose Tube	3	6
	Material	PBT	
	Outer Diameter (mm)	5.2 ± 0.1	
	Thickness	0.45 ± 0.05	
	Filling	GEL	
Center Strength Member	PE Coating / FRP Outer Diameter (mm)	5.5/3.4±0.1	
Water Block Material	Material	Water blocking Yarn & Water blocking Tape	
Armored	Material	Steel tape	
Sheath	Material	PE	
	Color	Black	
	Thickness	1.7 ± 0.2 mm	
Outer Diameter (mm)		20.5 ± 1	
Net Weight (kg/km)		370 ± 10	

2. Optical Fiber

Items	Units	Specification
Fiber Type	-	G652D
Attenuation	dB/km	1310nm ≤ 0.351550nm ≤ 0.21
Chromatic Dispersion	ps/nm.km	1310nm ≤ 3.51550nm ≤ 181625nm ≤ 22
Zero Dispersion Slope	ps/nm2.km	0.093
Zero Dispersion Wavelength	nm	1300 ~ 1324
PMD (M=20, Q=0.01%)	ps/√km	≤ 0.2
Cut-off Wavelength (λcc)	nm	≤ 1260
Attenuation vs. Bending (60mm x 100 turns)	dB	≤ 0.1 at 1625 nm
Mode Field Diameter@1310nm	μm	(8.6-9.5) ± 0.7
Core-Clad Concentricity	μm	≤ 0.5
Cladding Diameter	μm	125 ± 2
Cladding Non-circularity	%	≤ 0.8
Coating Diameter	μm	245 ± 5
Proof Test	Gpa	≥ 0.69

Specifications

3. Mechanical and environmental performance of the cable

No.	Items	Test Method	Acceptance Criteria
1	Tensile Loading Test	#Test Method: IEC 60794-1-E1- Long-tensile load: 800N- Short-tensile load: 2700N- Cable length: ≥ 50m	- Attenuation increment@1550nm: ≤ 0.1 dB - Short term fiber strain not exceed 0.6% - No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test Method: IEC 60794-1-E3- Long load: 300N / 100mm- Short load: 1000N / 100mm- Long 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- Striking surface radius:300 mm- Impact weigh: 3.5J- Impact frequency: ≥ 3/poi	-Attenuation increment@1550nm: ≤ 0.1 dB - No jacket cracking and fiberbreakage
4	Repeated Bending	#Test method:IEC 60794-1-E6- Mandrel diameter: 20 D (D = cable diameter)- Bent backwards and forwardsthrough angles: 180°- Bending frequency: 25 times- Bending speed: 2s/time	-Attenuation increment@1550nm: ≤ 0.1 dB - No jacket cracking and fiberbreakage
5	Torsion Test	#Test method: IEC 60794-1-E7- Length under test: 1 m- Subject weight: 50N- Angle: ±180 degree- Frequency: ≥ 10/point	-Attenuation increment@1550nm: ≤ 0.1 dB - No jacket cracking and fiberbreakage
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℃、-40℃、+ 70℃、+ 20℃- Testing Time: 24 hours/step- Cycle index: 2	-Attenuation increment@1550nm: ≤ 0.1 dB - No jacket cracking and fiberBreakage
8	Temperature	Operating: -40℃~+70℃Store/Transport: -40℃~+70℃Installation: -20℃~+70℃	

Specifications

4. Color of Fiber and Loose tube

NO.	1	2	3	4	5	6	7	8	9	10	11	12
Tube Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
NO.	1	2	3	4	5	6	7	8	9	10	11	12
Fiber Color	Blue	Orange	Green	Brown	Grey	natural	Red	Black	Yellow	Violet	Pink	Aqua

5. Fiber Optical Cable bending radius

- Static bending: ≥ 10 times than cable out diameter
- Dynamic bending: ≥ 20 times than cable out diameter

6. Reference Standard

- ITU-T G.652: Characteristics of a single-mode optical fiber and cable IEC 60794-2-31-2012 Indoor cables - Detailed specification for optical fiber ribbon cables for use in premises cabling.