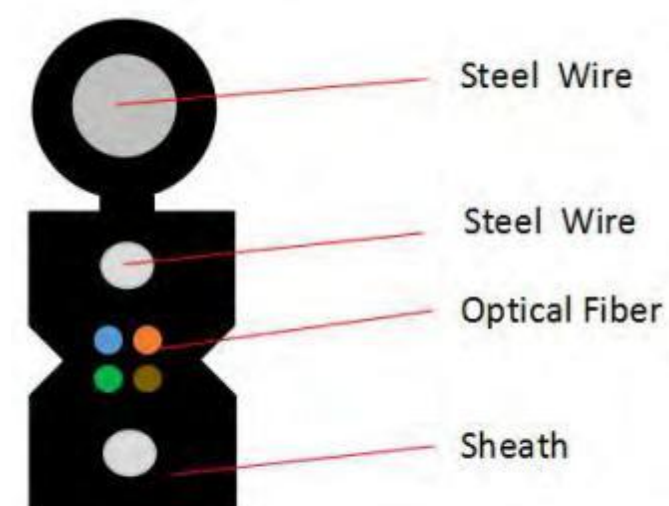


Specification

FOR
FTTH Butterfly Optic Cable
[GJYXCH(V)]

1. CABLE CONSTRUCTION

1.1 CROSS SECTIONAL DIAGRAM



1.2 STRUCTURE SPECIFICATION

Cable Type	GJYXCH(V)
Fiber Count	1 ~ 4
The Color Code of The Fibers	Natural/Blue, Orange, Green, Brown
Strength Member	Steel Wire
Messenger Wire	Galvanized Steel Wire or Phosphating Steel Wire
Jacket Material:	PVC/LSZH
OD of Cable(mm)	$2.0 \times 5.0 \pm 0.2$
Net Weight (kg/km)	18.7
Max.Tensile Loading (N)	600

Remarks: The Single core optical fiber color is natural.

2. Performance Parameters Of the Optical Fiber

2.1 Single Mode Fiber

ITEMS	UNITS	SPECIFICATION	
Fiber Type		G652D	G657A
Attenuation	dB/km	1310 nm ≤ 0.36 1550 nm ≤ 0.22	
Chromatic Dispersion	ps/nm.km	1310 nm ≤ 3.6 1550 nm ≤ 18 1625 nm ≤ 22	
Zero Dispersion Slope	ps/nm ² .km	≤ 0.092	
Zero Dispersion Wavelength	nm	1300 ~ 1324	
Cut-off Wavelength (λ_{cc})	nm	≤ 1260	
Attenuation vs. Bending (60mm x100turns)	dB	(30 mm radius, 100 rings) ≤ 0.1 @ 1625 nm	(10 mm radius, 1 ring) ≤ 1.5 @ 1625 nm
Mode Field Diameter	μm	9.2 ± 0.4 at 1310nm	9.2 ± 0.4 at 1310nm
Core-Clad Concentricity	μm	≤ 0.5	≤ 0.5
Cladding Diameter	μm	125 ± 1	125 ± 1
Cladding Non-circularity	%	≤ 0.8	≤ 0.8
Coating Diameter	μm	245 ± 5	245 ± 5
Proof Test	Gpa	≥ 0.69	≥ 0.69

2.2 Multi Mode Fiber

ITEMS		UNITS	SPECIFICATION				
			62.5/125	50/125	OM3.150	OM3.300	OM4.550
Fiber Core Diameter		μm	62.5 ± 2.5	50.0 ± 2.5	50.0 ± 2.5		
Fiber Core Non-circularity		%	≤ 6.0	≤ 6.0	≤ 6.0		
Cladding Diameter		μm	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0		
Cladding Non-circularity		%	≤ 2.0	≤ 2.0	≤ 2.0		
Coating Diameter		μm	245 ± 10	245 ± 10	245 ± 10		
Coat-Clad Concentricity		μm	≤ 12.0	≤ 12.0	≤ 12.0		
Coating Non-circularity		%	≤ 8.0	≤ 8.0	≤ 8.0		
Core-Clad Concentricity		μm	≤ 1.5	≤ 1.5	≤ 1.5		
Attenuation	850nm	dB/km	3.0	3.0	3.0		
	1300nm	dB/km	1.5	1.5	1.5		
OFL	850nm	MHz. km	≥ 160	≥ 200	≥ 700	≥ 1500	≥ 3500
	1300nm	MHz. km	≥ 300	≥ 400	≥ 500	≥ 500	≥ 500
The biggest theory numerical aperture		/	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015		

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: 0.5 times the short-term pulling force -. Short-tensile load: reference to clause 1.2 -. Cable length: ≥ 50 m	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test method: IEC 60794-1-E3 -.Long load: 1000 N/100mm -.Short load: 2200 N/100mm Load time: 1 minutes	-. Attenuation increment@1550 nm: ≤ 0.4 dB -. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method: IEC 60794-1-E4 -.Impact height: 1 m -.Impact weigh: 100 g -.Impact point: ≥ 3 -.Impact frequency: ≥ 1 /point	-. Attenuation increment@1550 nm: ≤ 0.4 dB -. No jacket cracking and fiber breakage
4	Repeated Bending	#Test method: IEC 60794-1-E6 -.Mandrel diameter: 30 H -.Subject weight: 2 kg -.Bending frequency: 300times -.Bending speed: 2 s/time	-. Attenuation increment@1550 nm: ≤ 0.4 dB -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method: IEC 60794-1-E7 -.Length: 1m -.Subject weight: 2 kg -.Angle: ± 180 degree -.Frequency: ≥ 20 /point	-. Attenuation increment@1550 nm: ≤ 0.4 dB -. No jacket cracking and fiber breakage
6	Temperature Cycling Test	#Test method: IEC 60794-1-F1 -.Temperature steps: $+20^{\circ}\text{C}$ 、 -10°C 、 $+60^{\circ}\text{C}$ 、 -20°C -.Testing Time: 8 hours/step -.Cycle index: 2	-. Attenuation increment@1550 nm: ≤ 0.3 dB -. No jacket cracking and fiber breakage
7	Temperature	Operating: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$ Store/Transport: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$ Installation: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$	

4. **FIBER OPTIC CABLE BENDING RADIUS**

Static bending: ≥ 10 times than cable out diameter

Dynamic bending: ≥ 20 times than cable out diameter.

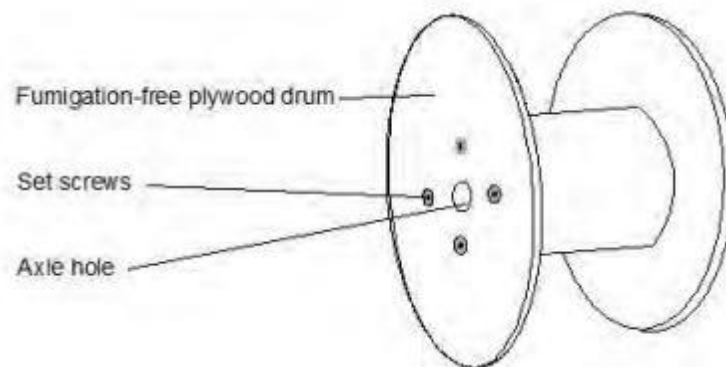
5. **PACKAGE AND MARK**

5.1 PACKAGE

Not allowed two length units of cable in one drum, Two ends should be packed inside drum, reserve length of cable not less than 1meter.

5.2 MARK

Cable Mark: Brand, Cable type, Fiber type and counts, Year of manufacture and Length marking.



6. **TEST REPORT**

Test report and certification supplied.