Specification

FOR

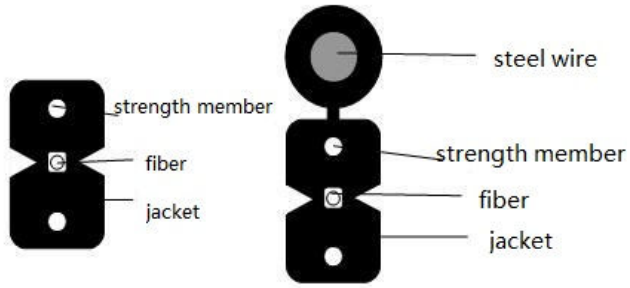
FTTH Butterfly Optic Cable

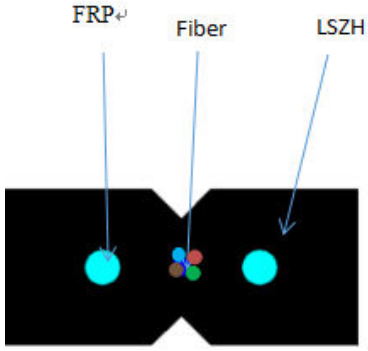
[GJXH(V) / GJXFH(V)]

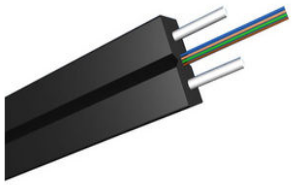
[GJYXCH(V) / GJYXFCH(V)]

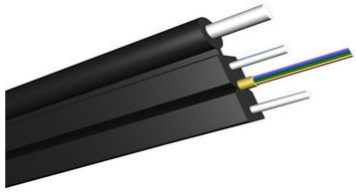
1.CABLE CONSTRUCTION

1.1. CROSS SECTIONAL DIAGRAM









1.2. STRUCTURE SPECIFICATION

Cable Type	**GJXH(V)**		**GJXFH(V)**		**GJYXCH(V)**		**GJYXFCH(V)**	
Fiber count	**1-2**	**4**	**1-2**	**4**	**1-2**	**4**	**1-2**	**4**
The Color Code of The fibers	Natural/Blue,Orange,Green, Brown							
Strength Member	Steel wire		K-FRP		Steel wire		K-FRP	
Messenger wire	—		—		Steel wire		Steel wire	
Jacket Material：	PVC/LSZH		PVC/LSZH		PVC/LSZH		PVC/LSZH	
OD of cable(mm)	2.0×3.0±0.1				2.0×5.0±0.1			
Net weight (kg/km)	10	10.5	8.5	9.5	20	20.5	18	18.6
Max.Tensile Loading (N)	200	200	80	80	600	600	600	600

Remarks:The Single core optical fiber color is natural.

2.Performance Parameters Of the Optical Fiber

2.1 Single Mode Fiber

LTEMS	UNITS	SPECIFICATION	
Fiber type		G652D	G657A
Attenuation	dB/km	1310nm≤ 0.4 1550nm≤ 0.3	
Chromatic Dispersion	ps/nm.km	1310nm≤ 3.6 1550nm≤ 18 1625nm≤ 22	
Zero Dispersion Slope	$ps/nm^2.km$	≤ 0.092	
Zero Dispersion Wavelength	nm	1300 ~ 1324	
Cut-off Wavelength (λcc)	nm	≤ 1260	
Attenuation vs. Bending (60mm x100turns)	dB	(30mm radius，100ring)≤ 0.1 @ 1625nm	(10mm radius，1ring)≤ 1.5 @ 1625nm
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		
C0at-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 2.1 -. Cable length：≥50m	-. Attenuation increment@1550nm:≤0.1dB -. 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@1550nm:≤0.4dB -. 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@1550nm:≤0.4dB -. No jacket cracking and fiber breakage
4	Repeated Bending	#Test method:IEC 60794-1-E6 -.Mandrel diameter：30H -.Subject weight：2kg -.Bending frequency：300times -.Bending speed：2s/time	-. Attenuation increment@1550nm:≤0.4dB -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method:IEC 60794-1-E7 -.Length：1m -.Subject weight:2kg -.Angle：±180 degree -.Frequency：≥20/point	-. Attenuation increment@1550nm:≤0.4dB -. No jacket cracking and fiber breakage

6	Temperature Cycling Test	#Test method:IEC 60794-1-F1 -.Temperature steps：＋20℃、－10℃、＋60℃、＋20℃ -.Testing Time：8 hours/step -.Cycle index：2	-. Attenuation increment@1550nm:≤0.3dB -. No jacket cracking and fiber breakage
7	temperature	Operating :-10℃~+60℃ Store/Transport:-10℃~+60℃ Installation:-10℃~+60℃	

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

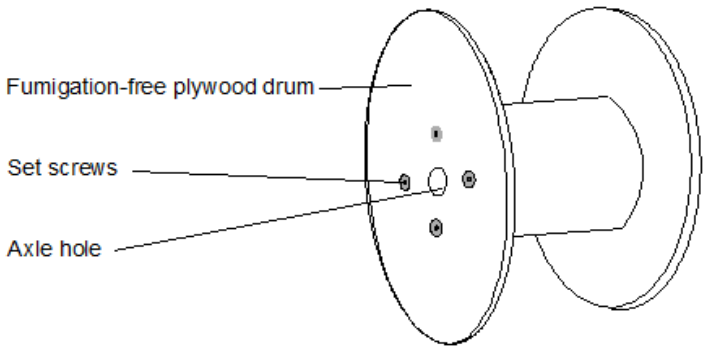
5.1 PACKAGE

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

6.2 MARK

Cable Mark: length, brand

Drum Mark: Manufacturer, cable category, No. of drum, length, GW. direction of rotation, manufacturing date.



7.TEST REPORT

Test report and certification supplied.