Specification

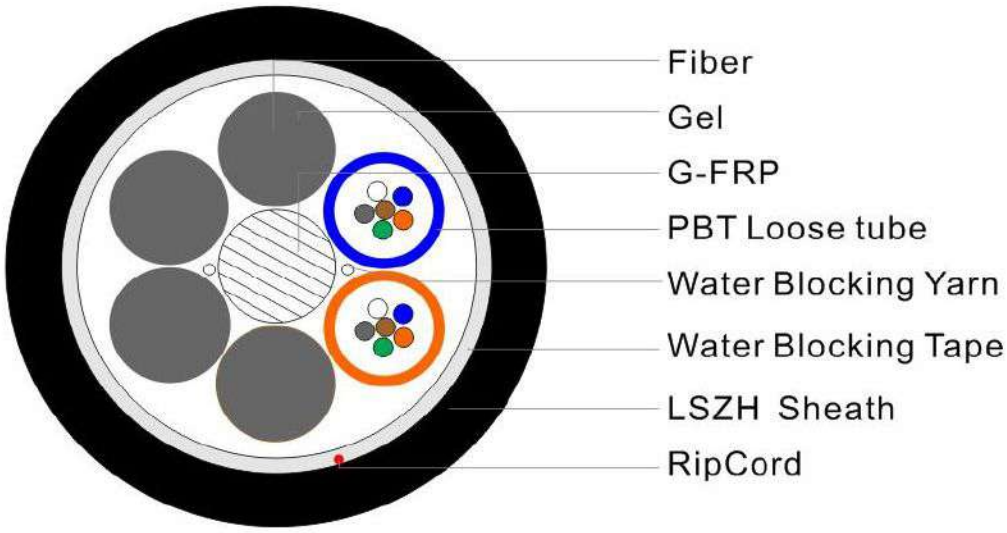
FOR

Amored Dielectric Optic Cable

[GYFTZY]

1.CABLE CONSTRUCTION

1.1 CROSS SECTIONAL DIAGRAM



1.2 TECHNICAL SPECIFICATION

Fiber count		**12F**
Loose Tube	OD(mm)	$1.8^{\pm 0.1}$
	Material	PBT
	Water Blocking Material	Gel
Max fiber count/tube		6
Core unit		2
Filler		4
FRP/Coating（mm）		1.8
Water Blocking Material		water-blocking yarn/water-blocking tape
Sheath	Thickness	Non. 1.5mm
	Raw Material	LSZH
OD of cable (mm)		8.8±0.2
Net weight (kg/km)		80±2

2. FIBER AND LOOSE BUFFER TUBE IDENTIFICATION

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

3.OPTICAL FIBER

3.1 Single Mode Fiber

LTEMS	UNITS	SPECIFICATION	
Fiber type		G652D	G657A
Attenuation	dB/km	1310nm ≤ 0.35 1550nm ≤ 0.22	
Chromatic Dispersion	ps/nm.km	1310nm≤ 3.5 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

3.2 Multi Mode Fiber

LTEMS		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

4.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：600N -. Short-tensile load：1500N -. 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：300 N/100mm -.Short load：1000 N/100mm Load time：1 minutes	-. Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method:IEC 60794-1-E4 -.Impact height： 1 m	-. Attenuation increment@1550nm:≤0.1dB

		-.Impact weigh： 450 g -.Impact point：≥5 -.Impact frequency：≥3/point	-. No jacket cracking and fiber breakage
4	Repeated Bending	#Test method:IEC 60794-1-E6 -.Mandrel diameter：20D (D = cable diameter) -.Subject weight：15kg -.Bending frequency：30 times -.Bending speed：2s/time	-. Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method:IEC 60794-1-E7 -.Length：1m -.Subject weight:25kg -.Angle：±180 degree -.Frequency：≥10/point	-. Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
6	Water Penetration Test	#Test method:IEC 60794-1-F5B -.Height of pressure head：1m -.Length of specimen：3m -.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:≤0.1dB -. No jacket cracking and fiber breakage
8	Drop Performance	#Test method:IEC 60794-1-E14 -.Testing length：30cm -.Temperature range：70±2℃ -.Testing Time：24 hours	-. No filling compound drop out
9	Temperature	Operating:-40℃~+60℃ Store/Transport :-50℃~+70℃ Installation -20℃~+60℃	

2.3 Fiber optical cable bending radius

Static bending：≥13 times than cable out diameter

Dynamic bending：≥25 times than cable out diameter.

3. Mark and Package

3.1 Cable Mark

3.1.1 Manufacturing year, fiber count, fiber type, sheath material, meter mark for without especial request.

3.1.2 Customized printing by order request.

3.2 Drum Mark

3.2.1. Drum size according to the length of cable packed.

3.2.2. Logo will be print on both side of drum, size will be according to customer request.

3.3.3. Label including manufacturing date, item number, length, description of cable, drum number. Format and information available be customized.

3.3 Package

3.3.1 Packing length, 2km/plywood reel, the other length packed available.

3.3.2 Packing material, cable on drum wrapped by protective foil, Plywood reel as usual package, metal reel available but shall be noted individually if required specially.