

Specification

FOR

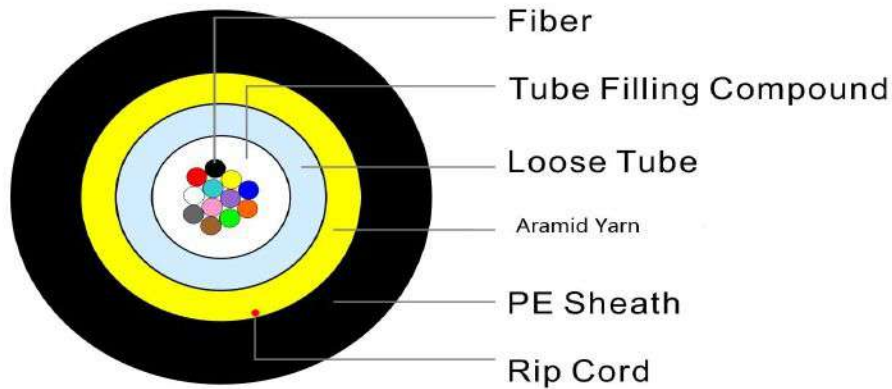
Non-Armored Optic Cable

[GYFXTY]

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1. CABLE CONSTRUCTION

1.1. CROSS SECTIONAL DIAGRAM



1.2. STRUCTURE SPECIFICATION

Items		DESCRIPTION
Fiber count		6F
The Color Code of The fibers		Blue,Orange,Green, Brown, Gray, White/natural
Loose Tube	OD(mm)	2.2±0.1
	Material	PBT
Water Block Material:		Water blocking Compound
Strength yarn		Aramid yarn
Sheath	Thickness	Non. 1.0mm
	Material	PE
OD of cable (mm)		6.5±0.2
Net weight (kg/km)		35±2

2. FIBER IDENTIFICATION

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

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3.OPTICAL FIBER

3.1 Single Mode Fiber

L TEMS	UNITS	SPECIFICATION	
Fiber type		G652D	G657A
Attenuation	dB/km	$1310\text{nm} \leq 0.36$ $1550\text{nm} \leq 0.22$	
Chromatic Dispersion	ps/nm.km	$1310\text{nm} \leq 3.5$ $1550\text{nm} \leq 18$ $1625\text{nm} \leq 22$	
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	(30mm radius, 100ring) $\leq 0.1 @ 1625\text{nm}$	(10mm radius, 1ring) $\leq$ 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 $\pm$ 1	125 $\pm$ 1
Cladding Non-circularity	%	≤ 0.8	≤ 0.8
Coating Diameter	μm	245 $\pm$ 5	245 $\pm$ 5
Proof Test	Gpa	≥ 0.69	≥ 0.69

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: 300N -. Short-tensile load: 600N -. Cable length: $\geq 50\text{m}$	-. Attenuation increment@1550nm: $\leq 0.1\text{dB}$ -. No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test method:IEC 60794-1-E3 -.Long load: 300 N/100mm	-. Attenuation increment@1550nm: $\leq 0.1\text{dB}$

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		-.Short load: 1000 N/100mm Load time: 1 minutes	-. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method:IEC 60794-1-E4 -.Impact height: 1 m -.Impact weigh: 450 g -.Impact point: ≥ 5 -.Impact frequency: ≥ 3 /point	-. Attenuation increment@1550nm: ≤ 0.1 dB -. 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: ≤ 0.1 dB -. 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: ≤ 0.1 dB -. 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: $+20^{\circ}\text{C}$ 、 -20°C 、 $+70^{\circ}\text{C}$ 、 $+20^{\circ}\text{C}$ -.Testing Time: 12 hours/step -.Cycle index: 2	-. Attenuation increment@1550nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
8	Drop Performance	#Test method:IEC 60794-1-E14 -.Testing length: 30cm -.Temperature range: $70\pm 2^{\circ}\text{C}$ -.Testing Time: 24 hours	-. No filling compound drop out
9	Temperature	Operating: $-40^{\circ}\text{C}\sim +60^{\circ}\text{C}$ Store/Transport : $-50^{\circ}\text{C}\sim +70^{\circ}\text{C}$ Installation $-20^{\circ}\text{C}\sim +60^{\circ}\text{C}$	

