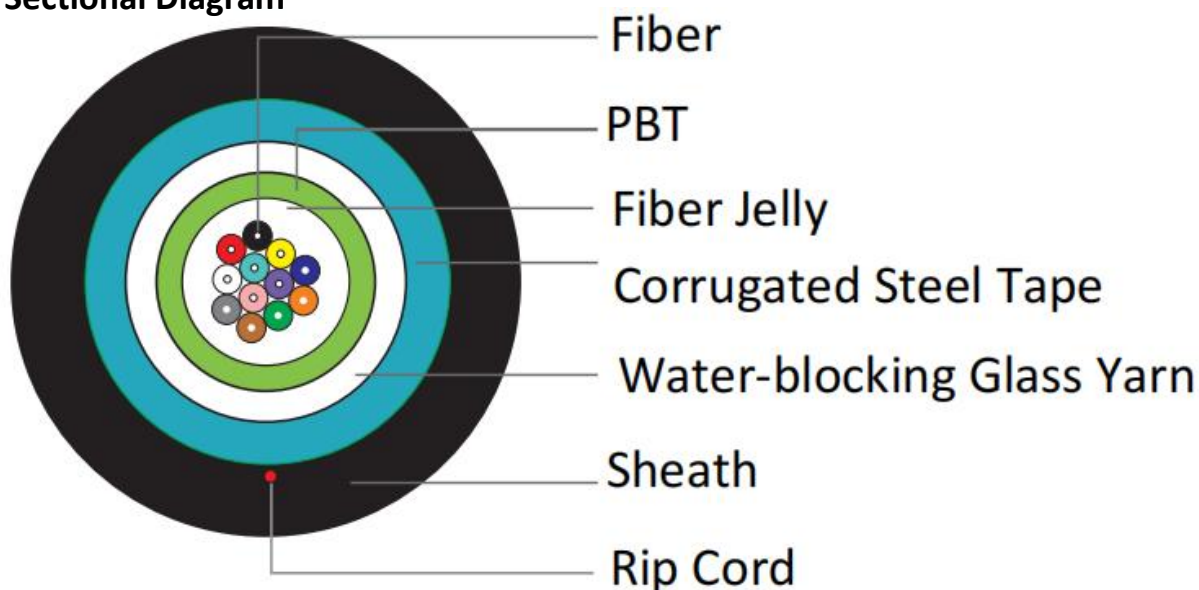


1. Cable Construction

1.1 Cross Sectional Diagram



1.2 Structure Specification

Items		DESCRIPTION	
Fiber count		2-12F	24F
Loose Tube	OD(mm):	$2.8^{\pm 0.1}$	$3.0^{\pm 0.1}$
	Material	PBT	
Water blocking material		Water blocking Compound	
Strength member		Glass yarn	
Rip Cord		1/Red	
Armoured Material		corrugated steel tape	
Sheath	Thickness	Non. 1.5mm	
	Material:	MDPE	
OD of cable (mm)		$7.8^{\pm 0.2}$	$8.1^{\pm 0.2}$
Net weight (kg/km)		$68^{\pm 2}$	$75^{\pm 2}$

1.3. FIBER IDENTIFICATION

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

2. OPTICAL FIBER

2.1 Single Mode Fiber

LTEMS	UNITS	SPECIFICATION	
Fiber type		G652D	G657A
Attenuation	dB/km	1310nm ≤ 0.36 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 (λ_{cc})	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

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	%	≤5.0	≤5.0	≤5.0		
Cladding Diameter	μm	125.0±1.0	125.0±1.0	125.0±1.0		
Cladding Non-circularity	%	≤1.0	≤1.0	≤1.0		

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		

2.3 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: 350N -. Short-tensile load: 1000N -. 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 -.Impact weigh: 450 g -.Impact point: ≥5 -.Impact frequency: ≥3/point	-. Attenuation increment@1550nm:≤0.1dB -. 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	-. No leakage through the open

		-.Height of pressure head: 1m -.Length of specimen: 3m -.Test time: 24 hours	cable end
7	Temperature Cycling Test	#Test method:IEC 60794-1-F1 -.Temperature steps: +20℃、-20℃、+70℃、+20℃ -.Testing Time: 12 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℃~+70℃ Store/Transport :-40℃~+70℃ Installation -40℃~+70℃	

2.4 FIBER OPTIC CABLE BENDING RADIUS

Static bending : ≥10 times than cable out diameter

Dynamic bending : ≥20times than cable out diameter.