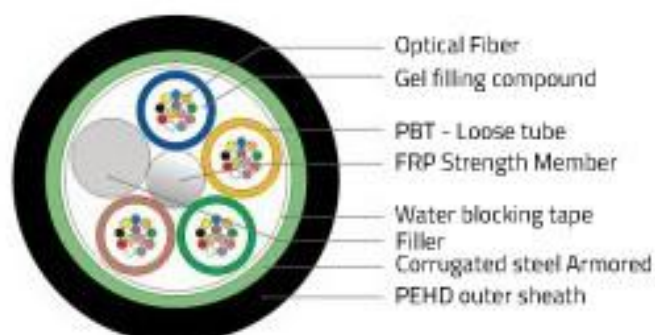


OPENETICS

Armored Optic Cable

1. Cable Construction

1.1 Cross Sectional Diagram



1.2 Technical Specification

Fiber count		12	24	48
Loose Tube	OD(mm):	1.8 $\pm$ 0.1	1.8 $\pm$ 0.1	2.0 $\pm$ 0.1
	Material:	PBT		
Max fiber count/tube		6	6	12
Core unit		6	6	6
Strength unit (FRP)		1.8	1.8	2.0
Water Block Material:		Water blocking Compound		
Armored	Outside	Steel Tape		
Sheath	Inside	Non.0.8mm		
	Outside	Non.1.5mm		
	Material:	PEHD		
OD of cable (mm)		12.2	12.2	12.8
Net weight (kg/km)		136	136	147

1.3 Fiber and Loose 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

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	%	≤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		

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: 1000N -.Short-tensile load: 2700N -.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: 3500 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: 1000 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: 25kg -.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: ±90 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	-. No leakage through the open cable end

		-.Length of specimen: 3m -.Test time: 24 hours	
7	Temperature Cycling Test	#Test method:IEC 60794-1-F1 -.Temperature steps: +20°C、-40°C、+70°C、+20°C -.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°C -.Testing Time: 24 hours	-. No filling compound drop out
9	Temperature	Operating:-40°C~+60°C Store/Transport :-50°C~+70°C Installation -20°C~+60°C	

2.4.Fiber Optic Cable Bending Radius

Static bending: ≥10 times than cable out diameter

Dynamic bending: ≥20times than cable out diameter

2.5.Sonatrach Especification Composition

Câble 12 fibres 2 tubes de 6 fibres, et le reste des tubes de remplissage.

Câble 24 fibres 4 tubes de 6 fibres, et le reste des tubes de remplissage.

Câble 48 fibres 4 tubes de 12 fibres, et le reste des tubes de remplissage.

Couleur Noir avec trait en Vert

RÉFÉRENCES	DESCRIPTION
F0037	Cable F/O 48F Monomode G652D (couleur noir avec un trait en vert)
F0038	Cable F/O 24F Monomodo G652D (couleur noir avec un trait en vert)
F0039	Cable F/O 12F Monomode G652D (couleur noir avec un trait en vert)