No.	REVISON	DATE
1	V0	19/10/2018
2		
3		

Specification

FOR

All Dielectric Antiroedor Optical Fiber Cable

[GYFY63]

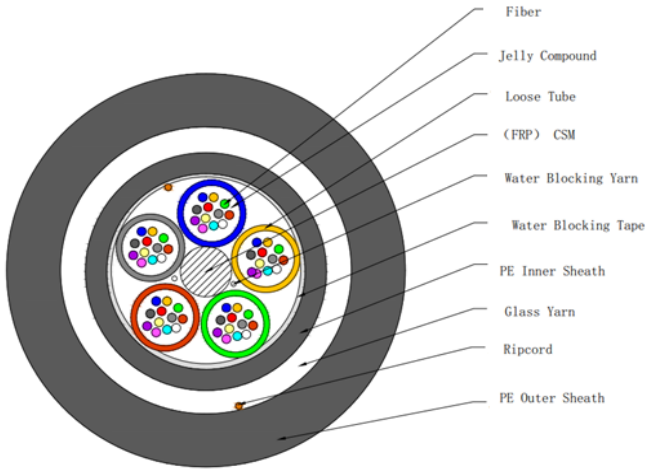
Canal autorizado:

Unicor s.a.

www.unicorsa.com.ar

1. CABLE CONSTRUCTION

1.1 CROSS SECTIONAL DIAGRAM



1.2 TECHNICAL SPECIFICATION

Fiber count		**12FO**	**24FO**	**48FO**	**72FO**
Loose Tube	OD(mm):	1.7	$1.7^{\pm0.1}$	$1.9^{\pm0.1}$	$2.0^{\pm0.1}$
	Tube No.	2	4	4	6
	Filler No.	3	1	1	0
	Material:	PBT	PBT	PBT	PBT
Max fiber count/tube		6	6	4*12	6*12
FRP/Coating (mm)		$1.5^{\pm0.1}$	$1.5^{\pm0.1}$	$1.5^{\pm0.1}$	$2.0^{\pm0.1}$
Water Blocking Material		Water-blocking tape/Water-blocking yarn			
Armoured member		Glass yarn			
Inner Sheath	Thickness:	Non.0.9mm			
	Material:	Black PE			
Out Sheath	Thickness:	Non. 1.6mm			
	Material:	Black PE			
Nominal Weights (kgs)		94	94	98	105
OD of cable (mm)		$11.0^{\pm0.5}$	$11.0^{\pm0.5}$	$11.5^{\pm0.5}$	$12.5^{\pm0.5}$

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		**ITU – T G . 652 D**
Attenuation	dB/km	1310nm ≤ 0.33 1383nm ≤ 0.30 1490nm ≤ 0.23 1550nm ≤ 0.20 1625nm ≤ 0.21
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
Mode Field Diameter	μm	9.2 ± 0.4 at 1310nm
Core-Clad Concentricity	μm	≤ 0.5
Cladding Diameter	μm	125±1
Cladding Non-circularity	%	≤ 0.8
Coating Diameter	μm	245±5
Proof Test	Gpa	≥ 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: 1500N -. Short-tensile load: 3000N -. Cable length: ≥50m Testing Time :1h	-. Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage -Fiber Strain ≤0.33%
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: 1m	-. Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage

		-.Impact weigh: 450 g -.Impact point: ≥3	
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: ±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: 1	-. 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℃	

5. FIBER OPTIC CABLE BENDING RADIUS

Static bending：≥10 times than cable out diameter

Dynamic bending：≥20times than cable out diameter.

6. PACKAGE AND MARK

6.1 PACKAGE

Not allowed two length units of cable in one drum, two ends should be sealed,. Two ends should be packed inside drum, reserve length of cable not less than 3 meters.

6.2 Cable MARK

Cable Mark: Brand、Cable type、Fiber type and counts、Year of manufacture、Length marking. Customized markings are available upon request.

7. TEST REPORT

Test report and certification supplied.