

Specification

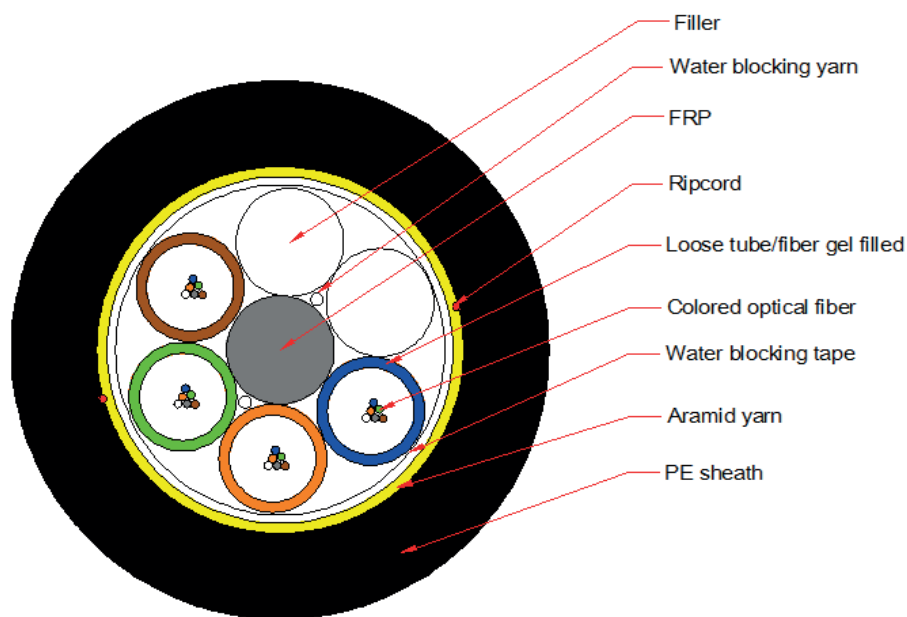
FOR

FIBER OPTICAL CABLE



1. Cable construction

1.1 Cross sectional diagram



1.2 Structure specification

Fiber type		TU-TG652D				
Fiber quantity (cores)		4F	8F	12F	24F	48F
Loose tube	Material	PBT				
	Water- blocking	Fiber gel				
	Quantity(ea)	1	2	2	4	4
Filler	Quantity(ea)	5	4	4	2	2
	Material	PP				
Central Strength member		FRP /PE coating available if cable construction in need				
Water blocking material		Water blocking yarn & tape				
Ripcord		1 / Red				
Strength member		Aramid yarn				
Jacket Material		PE				
Dimension of cable (mm)		9.5±0.1				10.7±0.1
Net weight (kg/km)		73±5%				91
MAT (N)		1200				1450
Span (Meter)		80				
Installation sag		1.0%				
Weather condition		25m/s, zero ice				

Fiber /Tube identification

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

Remarks: The single core optical fiber color is natural.

2. Performance parameters of fiber optic core

2.1 Single Mode Fiber

LTE MS	UNITS	SPECIFICATION
Fiber type		G652D
Attenuation	dB/km	1310nm ≤ 0.36 1383nm ≤ 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 (cc)	nm	≤ 1260
Attenuation vs. Bending (60mm x100turns)	dB	(30mm radius, 100ring) ≤ 0.1 @ 1625nm
Mode Field Diameter	m	9.2 0.4 at 1310nm
Core-Clad Concentricity	m	≤ 0.5
Cladding Diameter	m	125±0.7
Cladding Non-circularity	%	≤ 0.8
Coating Diameter	m	245±5

2.2 Fiber optical cable bending radius

Static bending: ≥10 times than cable out diameter Dynamic bending: ≥20 times than cable out diameter.

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: 0.5*MAT -. Short-tensile load: MAT -. 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: 1100 N/100mm -.Short load: 2200 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 -.Impact weight: 450g -.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:15kg -.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

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.

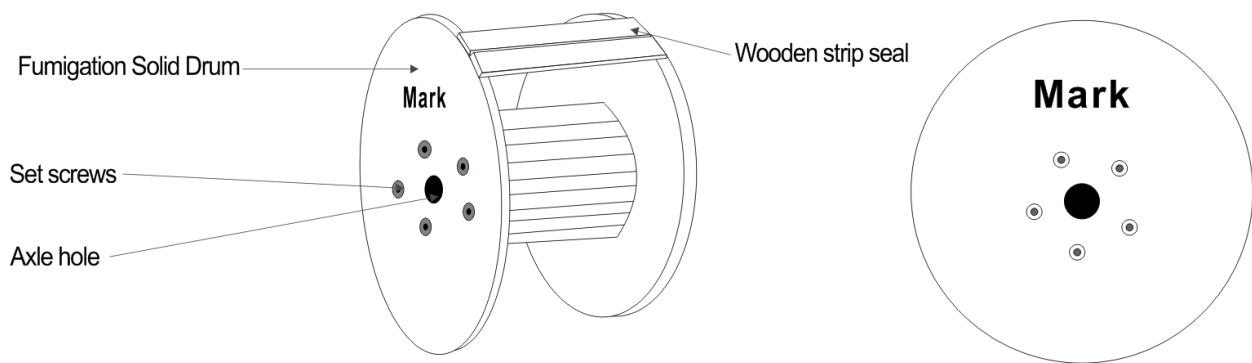
3.1.2 Customized printing by order request.

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, Label material customized available.



3.3 Package

3.3.1 Packing length, 4km/plywood reel, the other length packed available.

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

4. Test report supplied.