

Specification

FOR

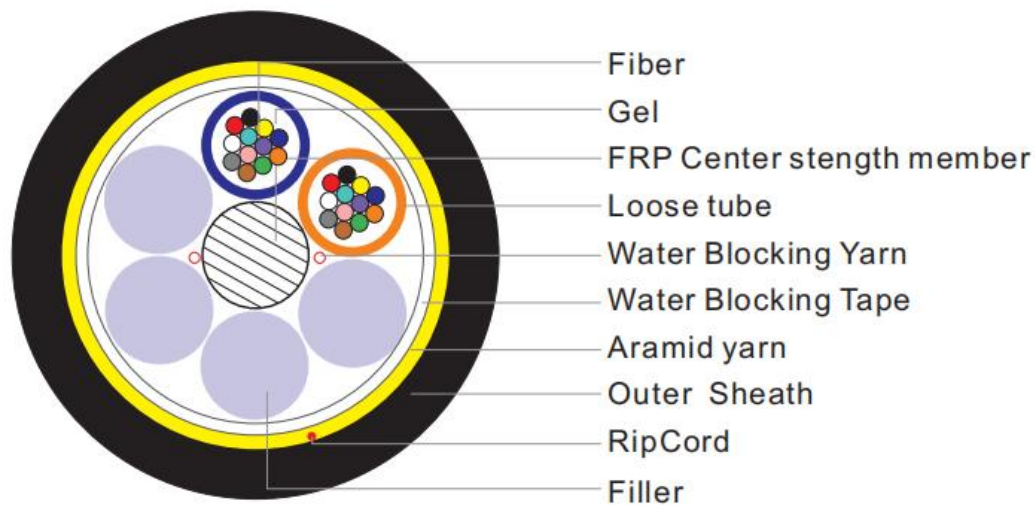
FIBER OPTICAL CABLE

All Dielectric Self-Supporting

ADSS-100M

1. Cable construction

1.1 Cross sectional diagram



1.2 Structure specification

Fiber type	ITU-G.652.D	
Fiber quantity (cores)	24F	48F
Tube quantity (ea)	4	4
Filler	Quantity (ea)	2
	Material	PE
Loose tube	OD (mm)	1.8 ^{±0.1}
	Thickness(mm)	0.3 ^{±0.1}
	Material	PBT
	Water- blocking	Thixotropic Jelly
Strength member	OD (mm)	1.9 ^{±0.1}
	Material	G-FRP
Water blocking material	Water-blocking yarn & blocking tape	
Outer strength member	Aramid yarn	
Ripcord (ea)	1/ Red	
Sheath	Material	PE
	Thickness (mm)	1.6 ^{±0.1}
Dimension of cable (mm)	9.2 ^{±0.2}	10.1 ^{±0.2}
Net weight (kg/km)	65 ^{±2}	79 ^{±2}
Span (m)	100M	
MAT (N)	1300	1500
Installation conditions	Wind Speed: 25m/s, Ice Thickness: 0mm, Sag: 1%, Fibre Strain: 0.3%	

1.3 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

2. Performance parameters of fiber optic core

2.1 Single Mode Fiber

LTEMS	UNITS	SPECIFICATION
Fiber type		G652.D
Attenuation	dB/km	≤ 0.34 @ 1310nm ≤ 0.22 @ 1550nm
Chromatic Dispersion	ps/nm.km	≤ 3.5 at 1310nm ≤ 18 at 1550nm ≤ 22 at 1625nm
Zero Dispersion Slope	ps/nm ² .km	≤ 0.092
Zero Dispersion Wavelength	nm	1312±10
PMD (M=20, Q=0.01%)	ps/√km	≤ 0.2
Cut-off Wavelength (λ _{cc})	nm	≤ 1260
Mode Field Diameter	μm	9.2 ± 0.4 @ 1310nm 10.4±0.5 @ 1550nm
Core-Clad Concentricity	μm	≤ 0.5
Cladding Diameter	μm	125±1
Cladding Non-circularity	%	≤ 0.8
Attenuation vs. Bending (60mm x100turns)	dB	≤ 0.1 at 1625nm
Coating Diameter	μm	245±7
Proof Test	Gpa	≥0.69

2.2 Mechanical and Environmental Performance of the Cable

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test	#Test method:IEC 60794-1-E1 -. Cable length: ≥25m	<u>increment@1550nm:≤0.05dB</u> -Fiber Strain ≤0.19%

		<ul style="list-style-type: none"> -Drawing speed:10m/min -retentiontime:1min -MAT: See Structure specification 	- No jacket cracking and fiber breakage
2	Crush Resistance Test	<ul style="list-style-type: none"> #Test method:IEC 60794-1-E3 -Long load: 300 N/100mm -Short load: 1000 N/100mm Load time: 10 min 	<ul style="list-style-type: none"> - Attenuation increment@1550nm:≤0.1dB - No jacket cracking and fiber breakage
3	Impact Resistance Test	<ul style="list-style-type: none"> #Test method:TIS2166-2548 -Impact height: 1m -Impact weigh: 450g -Impact point: ≥5 	<ul style="list-style-type: none"> - Attenuation increment@1550nm:≤0.2dB - No jacket cracking and fiber breakage
4	Repeated Bending	<ul style="list-style-type: none"> #Test method:IEC 60794-1-E6 -Mandrel diameter:25D (D = cable diameter) -Subject weight: 150N -Bending frequency: 30 times -Bending speed: 2s/time 	<ul style="list-style-type: none"> - Attenuation increment@1550nm:≤0.1dB - No jacket cracking and fiber breakage
5	Torsion Test	<ul style="list-style-type: none"> #Test method:IEC 60794-1-E7 -Length: 1m -Subject weight: 150N -Angle: ±180 degree -Frequency: ≥10/point 	<ul style="list-style-type: none"> - Attenuation increment@1550nm:≤0.1dB - No jacket cracking and fiber breakage
6	Water Penetration Test	<ul style="list-style-type: none"> #Test method:IEC 60794-1-F5B -Height of pressure head: 1m -Length of specimen: 1m -Test time: 1 hours 	- No leakage through the open cable end
7	Temperature Cycling Test	<ul style="list-style-type: none"> #Test method:IEC 60794-1-F1 -Temperature steps: +20℃、-30℃、+65℃、+20℃ -Constant temperature time: 24 hours -Cycle index: 2 	<ul style="list-style-type: none"> - Attenuation increment@1550nm:≤0.1dB - No jacket cracking and fiber breakage
8	Drop Performance	<ul style="list-style-type: none"> #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:-10℃~+60℃ Store/Transport :-20℃~+70℃ Installation -20℃~+70℃	

2.3 Fiber optical cable bending radius

Static bending: ≥ 13 times than cable out diameter

Dynamic bending: ≥ 25 times than cable out diameter

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.

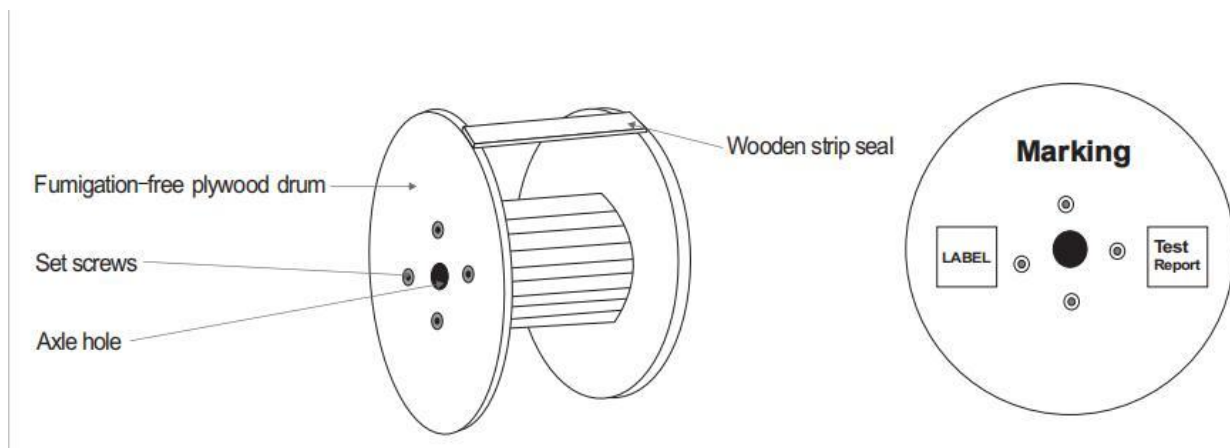
3.1.2 Customized printing by order request.

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.

3.2.3. Label including manufacturing date, item number, length, description of cable, drum number. Format and information available be customized.



3.3 Package

3.3.1 Packing length, 2km/plywood reel, the other length packed available.

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

4. Test report and certification supplied