
Specification

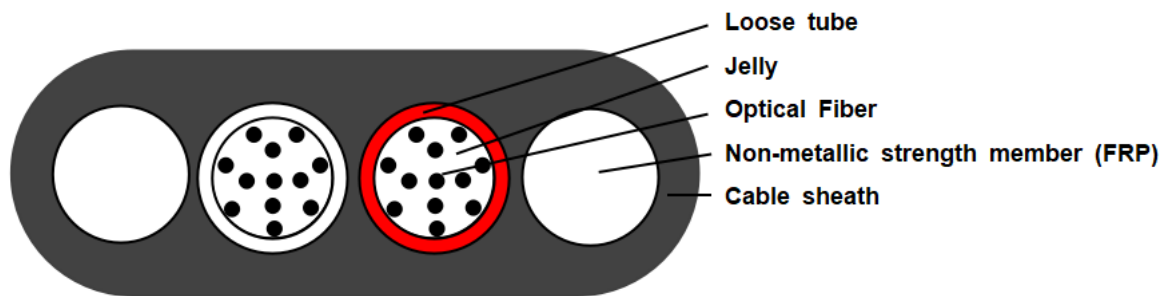
FOR

Flat Outdoor Cable

[GYFXY- FL] SM

1. Cable Construction

1.1 Cross Sectional Diagram



2. Technical Specification

Fiber Counts	24F
OD of Loose Tube (mm)	$2.0 \pm 0.1 \text{ mm} \times 2$
Max Fiber Counts/tube	12
FRP Strength Member	$2.0 \text{ mm} \times 2$
Outer Sheath Thickness	$1.25 \pm 0.2 \text{ mm}$
Outer Sheath Material	PE
OD of Cable	$4.5 \times 10 \pm 0.4 \text{ mm}$
Net weight (kg/km)	30kg/km
Tensile(N)	1200N
Operating temperature	- 40°C~+70°C
Store/Transport temperature	- 20°C~+70°C
Installation temperature	- 10°C~+60°C

3. 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	Grey	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	Grey	natural	Red	Black	Yellow	Violet	Pink	Aqua

4. Optical Fiber

Category	Description		Specifications
Type			G.652D
		@1310nm	$\leq 0.35 \text{ dB/km}$
		@1383nm	$\leq 0.35 \text{ dB/km}$

Optical Specifications	Attenuation	@1550nm	≤0.22dB/km
		@1625nm	≤0.25dB/km
	Attenuation Non-uniformity		≤0.03 dB
	Point Discontinuity @1310nm,1550nm		≤0.03 dB
	Attenuation vs. Wavelength	@1285~1330nm	≤0.05 dB/km
		@1525~1575nm	≤0.05 dB/km
	Zero Dispersion Wavelength		1300~1324
	Zero Dispersion Slope		≤0.092ps/nm.km
	Dispersion	@1310nm	≤3.5 ps/nm.km
		@1550nm	≤18 ps/nm.km
	Polarization Mode Dispersion(PMD)		≤0.2ps/km1/2
	PMD Link value		≤0.2ps/km1/2
	Cable Cutoff Wavelength(λ_{cc})		≤1260nm
	Macro bending Loss (100 turns; Φ 60mm) @1625nm		≤0.10 dB
	Mode Field Diameter	@1310nm	9.2±0.6 μ m
		@1550nm	10.4±0.8 μ m
	Effective Group Index of Refraction	@1310nm	1.4675
		@1550nm	1.4681
Dimensional Specifications	Fiber Curl Radius		≥4.0m
	Cladding Diameter		125±0.8 μ m
	Mode field Core/clad concentricity		≤0.5 μ m
	Cladding Non-Circularity		≤1.0%
	Coating Diameter		245±5 μ m
	Coating/Cladding Concentricity		≤8 μ m
	Coating Non-Circularity		≤6.0%
Mechanical Specifications	Proof Test		≥1.0%
	Peak Coating Strip Force		1.0~8.9N
Environmental Specifications	Temperature Cycling Induced Attenuation @1310nm,1550nm,1625nm(-60°C to+85°C)		≤0.05 dB/km

5. Mechanical and Environmental Performance of the Cable

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test	#Test method: IEC 60794-1-E1 -. MAT -. Cable length: ≥ 50 m	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
2	Crush	#Test method: IEC 60794-1-E3	-. Attenuation increment@1550 nm:

	Resistance Test	-.Long load: 200 N/100mm -.Short load: 1000 N/100mm Load time:1 min of short term load, followed by 10 min of long term load	≤ 0.1 dB -. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method: IEC 60794-1-E4 -.Impact height: 1 m -.Impact energy: 10 J with striking surface radius of 300 mm -.Impact point: ≥ 5 -.Impact frequency: $\geq 3/\text{point}$	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
4	Repeated Bending	#Test method: IEC 60794-1-E6 -.Mandrel diameter: 20 D (D = cable diameter) -.Bent backwards and forwards through angles: 180° -.Bending frequency: 25 times -.Bending speed: 2s/time	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method: IEC 60794-1-E7 -.Length: 2 m -.Tension : 50 N -.Angle: ± 180 degree -.Frequency: $\geq 10/\text{point}$	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
6	Water Penetration Test	#Test method: IEC 60794-1-F5B -.Height of pressure head: 1 m -.Length of specimen: 3 m -.Test time: 24 hours	-. No leakage through the open cable end
7	Temperature Cycling Test	#Test method: IEC 60794-1-F1 -.Temperature steps: $+ 20^\circ\text{C}$ 、 $- 40^\circ\text{C}$ 、 $+ 70^\circ\text{C}$ 、 $+ 20^\circ\text{C}$ -.Testing Time: 24 hours/step -.Cycle index: 2	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
8	Drop Performance	#Test method:IEC 60794-1-E14 -.Testing length: 30 cm -.Temperature range: $70 \pm 2^\circ\text{C}$ -.Testing Time: 24 hours	-. No filling compound drop out

5.2 Fiber Optical Cable bending radius

Static bending: ≥ 12.5 times than cable out diameter

Dynamic bending: ≥ 25 times than cable out diameter.

6. Reference Standard

ITU-T G.652 : Characteristics of a single-mode optical fibre and cable

IEC 60794-4-2018--Optical fibre cables. Sectional specification. Aerial op.

7. Package and Mark

7.1 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.

2~4km/roll Wooden Drum

7.2 Mark

According to customer requirements