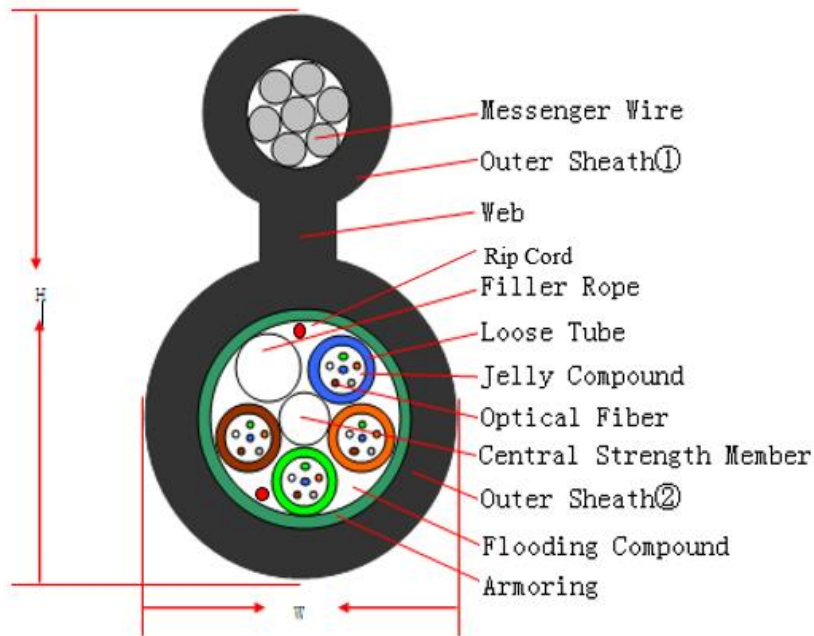


# Aerial Optical Fiber Cable (GYFTC8S)

## Cable Design



## Technical Data Sheet

No. of cable		4	6	8	12	24	36	48	96	
Fiber Model		G.652D								
Design (Strength Member +Tube &Filler)		1+5							1+8	
Central Strength Member	Material	FRP							FRP+PE	
	Diameter (±0.05) mm	1.4							3.2	
Loose Tube	Material	PBT								
	Diameter (±0.06) mm	1.65				1.90				
	Thickness (±0.03) mm	0.28				0.30				
	The Max.Core NO./Tube	4		6		12				
Filler Rope	Material	PP								
	Diameter (±0.05) mm	1.65				1.90				
	NO.	4	3	3	1	2	1	/		

Armoring	Material	Steel tape		
	Thickness (+0.03) mm	0.20		
Ripcord (Material)		Nylon		
Outer Sheath①	Material	MDPE		
	Thickness (±0.2) mm	1.5		
Outer Sheath②	Material	MDPE		
	Thickness (±0.2) mm	1.6		
Web	Material	MDPE		
	Size (±0.5) mm	2.0*3.0		
Messenger Wire	Material	Galvanized Steel Strand Wire		
	Size (±0.1) mm	R7×0.9	R7×1.0	
Cable Diameter(W×H) (±0.5) (±1.0)mm		8.9×17.6	9.4×18.1	11.2×20.2
Cable Weight (±10) kg/km		143	152	190
Allowable Tensile Strength(N)		3000		
Allowable Crush Resistance(N/100mm)		1000		
Application		Aerial		
Attenuation	1310nm	≤0.35dB/ km		
	1550nm	≤0.21dB/ km		
Min. bending radius	Dynamic	20.0×Cable-φ		
	Static	10.0×Cable-φ		
Temperature range (°C)	Installation	-20~+60		
	Transport &Storage	-40~+70		
	Operation	-40~+70		

### Fibre Colours

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

### Loose Tube Colours

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8				
Color	Red	Black				

### The properties of single mode optical fiber (ITU-T Rec. G.652.D)

Item	Specification
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Fiber type	Single mode
Fiber material	Doped silica
Attenuation coefficient @ 1310 nm @ 1383 nm @ 1550 nm @ 1625 nm	$\leq 0.35$ dB/km $\leq 0.32$ dB/km $\leq 0.21$ dB/km $\leq 0.25$ dB/km
Point discontinuity	$\leq 0.05$ dB
Cable cut-off wavelength	$\leq 1260$ nm
Zero-dispersion wavelength	1300 ~ 1324 nm
Zero-dispersion slope	$\leq 0.092$ ps/(nm <sup>2</sup> .km)
Chromatic dispersion @ 1288 ~ 1339 nm @ 1271 ~ 1360 nm @ 1550 nm @ 1625 nm	$\leq 3.5$ ps/(nm. km) $\leq 5.3$ ps/(nm. km) $\leq 18$ ps/(nm. km) $\leq 22$ ps/(nm. km)
PMD <sub>Q</sub> (Quadrature average*)	$\leq 0.2$ ps/km <sup>1/2</sup>
Mode field diameter @ 1310 nm	9.2±0.4 μm
Core / Clad concentricity error	$\leq 0.5$ μm
Cladding diameter	125.0 ± 0.7 μm
Cladding non-circularity	$\leq 1.0\%$
Primary coating diameter	245 ± 10 μm
Proof test level	100 kpsi (=0.69 Gpa), 1%
Temperature dependence 0oC~ +70oC @ 1310 & 1550nm	$\leq 0.1$ dB/km

### Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 794-1-2-E1	- Load: Short term tension - Length of cable: about 50m	- Fiber strain $\leq 0.33\%$ - Loss change $\leq 0.1$ dB @1550 nm - No fiber break and no sheath damage.

Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- Loss change $\leq 0.05\text{dB}@1550\text{nm}$ - No fiber break and no sheath damage.
Impact Test IEC 60794-1-2-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 5J	- Loss change $\leq 0.1\text{dB}@1550\text{nm}$ - No fiber break and no sheath damage.
Temperature Cycling Test YD/T901-2001-4.4.4.1	- Temperature step: +20°C→-40°C→+70°C →+20°C - Time per each step: 12 hrs - Number of cycle: 2	- Loss change $\leq 0.05 \text{ dB/km}@1550 \text{ nm}$ - No fiber break and no sheath damage.

### Sheath marking

The optical fiber drop cable shall have sequentially numbered length marking at intervals of approximately 1 meter. The starting number of ordering length for any coil shall begin with zero meter. The accuracy of the measurement of length marking shall be held within the limits of  $\pm 1\%$ .

- a) Type of wire
- b) Year and month of manufacture
- c) Length marking each meter along the wire

GYFTC8S- ××B1	2025	=0001m=
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(a)

(b)

(c)