

## Central tube Aerial Fiber optical cable G652D PE Sheath (GYFXTY)

### Cable Design



### Technical data

No. of cable		6	12	24
Fiber Model		G.652D		
Strength Member	Material	FRP		
	Diameter (±0.05) mm	1.5	1.5	1.8
	NO.	2		
Loose Tube	Material	PBT		
	Diameter (±0.06) mm	2.1		2.8
	Thickness (±0.03) mm	0.35		0.40
	The Max.Core NO./Tube	6	12	24
Outer Sheath (Material)		MDPE		
Cable Diameter (±0.2) mm		7.6		8.9
Cable Weight (±5) kg/km		48		66
Allowable Tensile Strength		2000N		
Allowable Crush Resistance		1000N/100mm		
Min. bending radius	Without Tension	10.0×Cable-φ		
	Under Maximum Tension	20.0×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
No.	13	14	15	16	17	18
Color	Blue+P	Orange+P	Green+P	Brown+P	Gray+P	White+P
No.	19	20	21	22	23	24
Color	Red+P	Natural+P	Yellow+P	Violet+P	Pink+P	Aqua+P

\* "P" means Point mark

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

Item	Specification
Fiber type	Single mode
Fiber material	Doped silica
Attenuation coefficient	
@ 1310 nm	≤ 0.36 dB/km
@ 1383 nm	≤ 0.32 dB/km
@ 1550 nm	≤ 0.22 dB/km
@ 1625 nm	≤ 0.30 dB/km
Point discontinuity	≤ 0.05 dB
Cable cut-off wavelength	≤ 1260 nm
Zero-dispersion wavelength	1300 ~ 1324 nm
Zero-dispersion slope	≤ 0.092 ps/(nm <sup>2</sup> .km)
PMD <sub>Q</sub> (Quadrature average*)	≤ 0.2 ps/km <sup>1/2</sup>
Mode field diameter @ 1310 nm	9.2±0.4 μm
Core / Clad concentricity error	≤ 0.5 μm
Cladding diameter	125.0 ± 0.7 μm
Cladding non-circularity	≤ 1.0%
Primary coating diameter	245 ± 10 μm
Proof test level	100 kpsi (=0.69 Gpa), 1%
Temperature dependence 0oC~ +70oC @ 1310 & 1550nm	≤ 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 ≤ 0.36% - Loss change ≤ 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 ≤ 0.05dB@1550nm - 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: $+20^{\circ}\text{C} \rightarrow -40^{\circ}\text{C} \rightarrow +70^{\circ}\text{C}$ $\rightarrow +20^{\circ}\text{C}$ - 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.