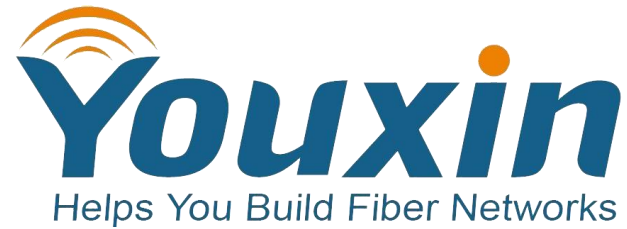
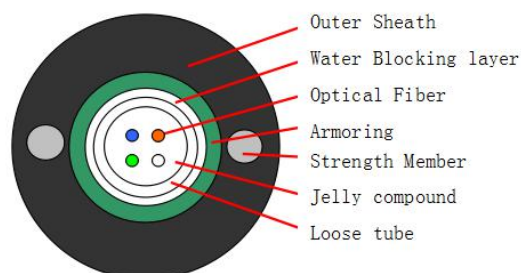


**Ningbo Youxin Optic-Electronic Technology Co.,Ltd**



**TECHNICAL DATA SHEET FOR**  
**Outdoor Single Mode Fiber Optic Cable**  
**GYXTW (G.652D)**

## Cable Design



## Technical data

No. of cable		2~8	10~12
Fiber Model		G.652D	
Strength Member	Material	Steel Wire	
	Diameter mm	0.8	
Loose Tube	Material	PBT	
	Diameter ( $\pm 0.06$ ) mm	1.8	2.0
	Thickness ( $\pm 0.03$ ) mm	0.28	0.32
Water Blocking layer (Material)		Water Blocking Tape	
Armoring	Material	Steel Strip	
	Thickness ( $\pm 0.05$ ) mm	0.20	
Outer Sheath (Material)		MDPE	
Cable Diameter ( $\pm 0.2$ ) mm		7.7	7.9
Cable Weight ( $\pm 5$ ) kg/km		56	58
Min. bending radius	Without Tension	10.0×Cable- $\phi$	
	Under Maximum Tension	20.0×Cable- $\phi$	
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

## 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 @ 1383 nm @ 1550 nm @ 1625 nm	≤ 0.35 dB/km ≤ 0.30 dB/km ≤ 0.21 dB/km ≤ 0.24 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)
Chromatic dispersion @ 1288 ~ 1339 nm @ 1271 ~ 1360 nm @ 1550 nm @ 1625 nm	≤3.5 ps/(nm. km) ≤5.3 ps/(nm. km) ≤18 ps/(nm. km) ≤22 ps/(nm. 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

## Application

NO.	Item	Requirement	
1	Allowable Tensile Strength	1200 N	
2	Allowable Crush Resistance	Short Term	1000 (N/100mm)
		Long Term	300 (N/100mm)

## 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 ≤ 0.33% - 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°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) Manufacturer's name
- b) Type of wire
- c) Year and month of manufacture
- d) Length marking each meter along the wire

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- (a)                      (b)                      (c)                      (d)