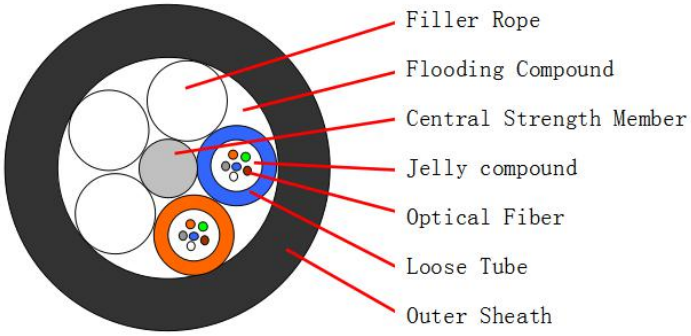
Outdoor Communication Cable(GYFTY)

Cable Design



Technical data

No. of cable		4	8	12	24	48	96	144
Fiber Model		G.652D						
Design(StrengthMember+Tube&Filler)		1+5						
Central Strength Member	Material	FRP						
	Diameter（±0.03）mm	1.5					2.0	
Additional Sheath	Material	MDPE						
	Thickness（±0.1）mm	—	—	—	—	—	3.2	5.8
Loose Tube	Material	PBT						
	Diameter（±0.03）mm	1.65				1.90		
	Thickness（±0.03）mm	0.25				0.30		
	The Max.Core NO./Tube	4	4	6	6	12	12	12
Water Blocking layer（Material）		Flooding Compound						
Outer Sheath	Material	MDPE						
	Thickness（±0.1）mm	1.6						
Cable Diameter（±0.2）mm		8.0				8.5	10.2	12.7
Cable Wetght（±10）kg/km		50				60	85	130
Min. bending radius	Without Tension	10.0×Cable-φ						
	Under Maximum Tension	20.0×Cable-φ						
Temperature range（℃）	Installation	-20~+60						
	Transport&Storage	-40~+70						
	Operation	-40~+70						

Fibre Color

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 Color

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 ≤0.32 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^2.km)
PMD_Q (Quadrature average*)	≤0.2 ps/km$^{1/2}$
Mode field diameter @ 1310 nm	9.2±0.4 um
Core / Clad concentricity error	≤0.5 um
Cladding diameter	125.0 ±0.7 um
Cladding non-circularity	%1.0≤
Primary coating diameter	245 ±10 um
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: 1000N - 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: 800N/100mm - 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 ≤ 0.1dB@1550nm - No fiber break and no sheath damage.
Temperature Cycling Test YD/T901-2001-4.4.4.1	- Temperature step: +20ºC→-40ºC→+70ºC→+20ºC - Time per each step: 12 hrs - Number of cycle: 2	- Loss change ≤ 0.05 dB/km@1550 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 whit zero meter. The accuracy of the measurement of lenth marking shall be held within the limits of ±1%.

a) Manufacturer's name
b) Type of wire
c) Year and month of manufacture
d) Length marking each meter along the wire