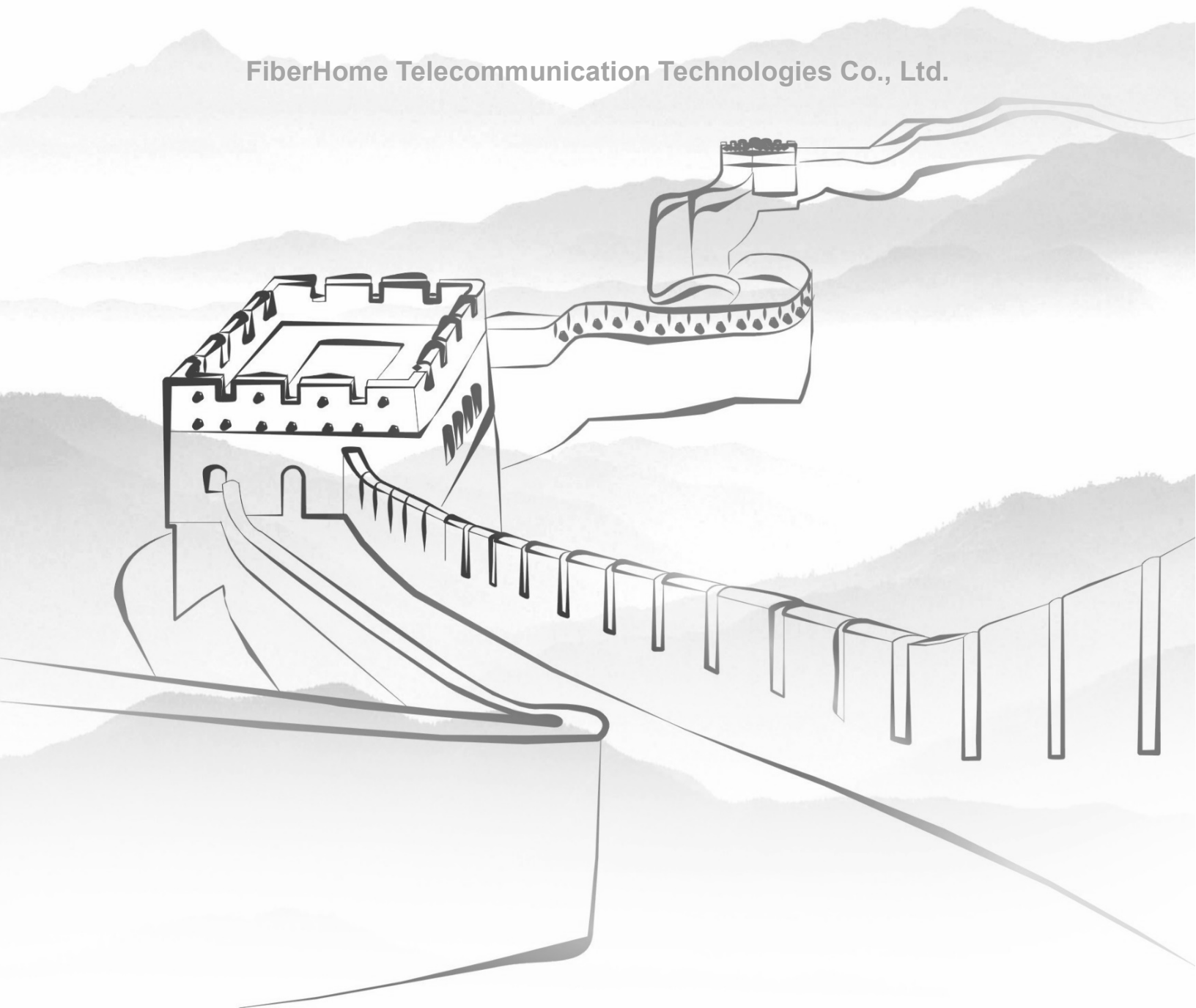


Optical Fiber Cable Specification



FiberHome Telecommunication Technologies Co., Ltd.



GYFS-6/12/24/36/48/72 G.652D

Cable Design



- **Central Strength Member (CSM):** Glass fiber reinforced plastic rod (GFRP), with PE sheath covering when needed.
- **Loose Tube:** PBT plastic material, containing 12 fibers and filled with a suitable water tightness jelly.
- **Stranding:** Loose tubes & fillers SZ stranded around CSM.
- **Longitudinal Water Tightness:** Dry core with water swellable elements.
- **Ripcord:** 2 ripcords under sheath.
- **Protection layer:** The corrugate steel tape provides rodent proof and crushresistance.
- **Outer Sheath:** Black HDPE.

Cable Specification

Cable description							
Item	Specified	Measure	Measure	Measure	Measure	Measure	Measure
Cable Cores		6	12	24	36	48	72
No. of Tubes		1	1	2	3	4	6
Fiber Counts in Tube		6	12	12	12	12	12
No. of Fillers		5	5	4	3	2	/
Tube/Filler- Φ	mm	2	2.2	2.2	2.2	2.2	2.2
CSM- Φ	mm	2.1	2.3	2.3	2.3	2.3	2.3
Coated CE- Φ	mm	/	/	/	/	/	/
Thickness of Outer Sheath	mm	1.6	1.6	1.6	1.6	1.6	1.6
Cable Diameter	mm	10.5±0.3	11.1±0.3	11.1±0.3	11.1±0.3	11.1±0.3	11.1±0.3
Cable Weight	kg/km	100±15	112±15	112±15	112±15	112±15	113±15
Tensile Strength	N	2100	2300	2300	2300	2300	2300

GYFS-96 G.652D

Cable Design



- **Central Strength Member (CSM):** Glass fiber reinforced plastic rod (GFRP), with PE sheath covering when needed.
- **Loose Tube:** PBT plastic material, containing 12 fibers and filled with a suitable water tightness jelly.
- **Stranding:** Loose tubes & fillers SZ stranded around CSM.
- **Longitudinal Water Tightness:** Dry core with water swellable elements.
- **Ripcord:** 2 ripcords under sheath.
- **Protection layer:** The corrugate steel tape provides rodent proof and crushresistance.
- **Outer Sheath:** Black HDPE.

Cable Specification

Cable description		
Item	Specified	Measure
Cable Cores		96
No. of Tubes		8
Fiber Counts in Tube		12
No. of Fillers		/
Tube/Filler- Φ	mm	2.2
CSM- Φ	mm	2.5
Coated CE- Φ	mm	3.8
Thickness of Outer Sheath	mm	1.8
Cable Diameter	mm	13±0.3
Cable Weight	kg/km	147±15
Tensile Strength	N	2800

Color Code for Fiber and Loose Tube



Cable Performance

Cable performance		
Test	Specified Value	Acceptance Criteria
Tensile IEC 60794-1-21, E1	2100-2800 N, 1 min, L≥50m	Δα≤0.10dB, no sheath damage after test
Crush IEC 60794-1-21, E3	2000 N/10cm, 1 min, Plate/Plate	Δα≤0.10dB, no sheath damage after test
Impact IEC 60794-1-21, E4	4.5 J, 1 time/3 points, R=300mm	Δα≤0.10dB, no sheath damage after test
Repeated Bending IEC 60794-1-21, E6	R=25D, 25 cycles, 150N	Δα≤0.10dB, no sheath damage after test
Torsion IEC 60794-1-21, E7	2m, 10 cycles, ±180°, 150N	Δα≤0.10dB, no sheath damage after test
Temperature Cycling IEC 60794-1-22, F1	2 cycles, -20~+70°C, 12 h	Δα≤0.10dB/km, no sheath damage after test
Water Penetration IEC 60794-1-22, F5	3m sample, 1m height, 24 h	No water leakage after test

Fiber Performance

G.652D performance		
Characteristics		Acceptance Value
Attenuation (IEC 60793-1-40)	@1310nm	≤0.35 dB/km
	@1383nm	≤0.35 dB/km
	@1550nm	≤0.21 dB/km
	@1625nm	≤0.23 dB/km
Mode field diameter (MFD)	@1310nm	9.2±0.4 μm
	@1550nm	10.4±0.5 μm
Chromatic dispersion coefficient (IEC 60793-1-42)	1288~1339nm (absolute value)	≤3.5 ps/(nm·km)
	1271~1360nm (absolute value)	≤5.3 ps/(nm·km)
	@1550 nm	≤18 ps/(nm·km)
Zero-dispersion wavelength		1302nm~1322 nm
Zero-dispersion slope		≤0.092 ps/(nm ² ·km)
Cable cut-off wavelength λ _{cc} (nm)		≤1260 nm
PMD (for fiber on the reel) (IEC 60793-1-48)		≤0.20 ps/km ^{1/2}
Cladding diameter		125±0.7 μm
Cladding non-circularity		≤0.60 %
Core/cladding concentricity error		≤0.5 μm
Proof test		≥0.69 GPa (100kpsi)

Sheath Marking

The outer sheath is marked in 1 meter intervals as follows (Example):

LinkedPro by FiberHome GYFS 12FO G652D GYFS12C 2025 LOT1 Drum NO. ***m

Cable Packing

1.1 Standard cable length for each reel

- Standard length: 4000m per reel Order tolerance: ± 5%.
- Other cable length available.
- Nonstandard length; Max 5% as per mutual agreement under Customer Approval.

1.2 Cable end retaining methods

- Iron wooden reel: inner retaining.
- Wooden reel: outer retaining recommended, inner retaining or groove retaining available.



Iron wooden reel



Wooden reel

----- End of Specification -----