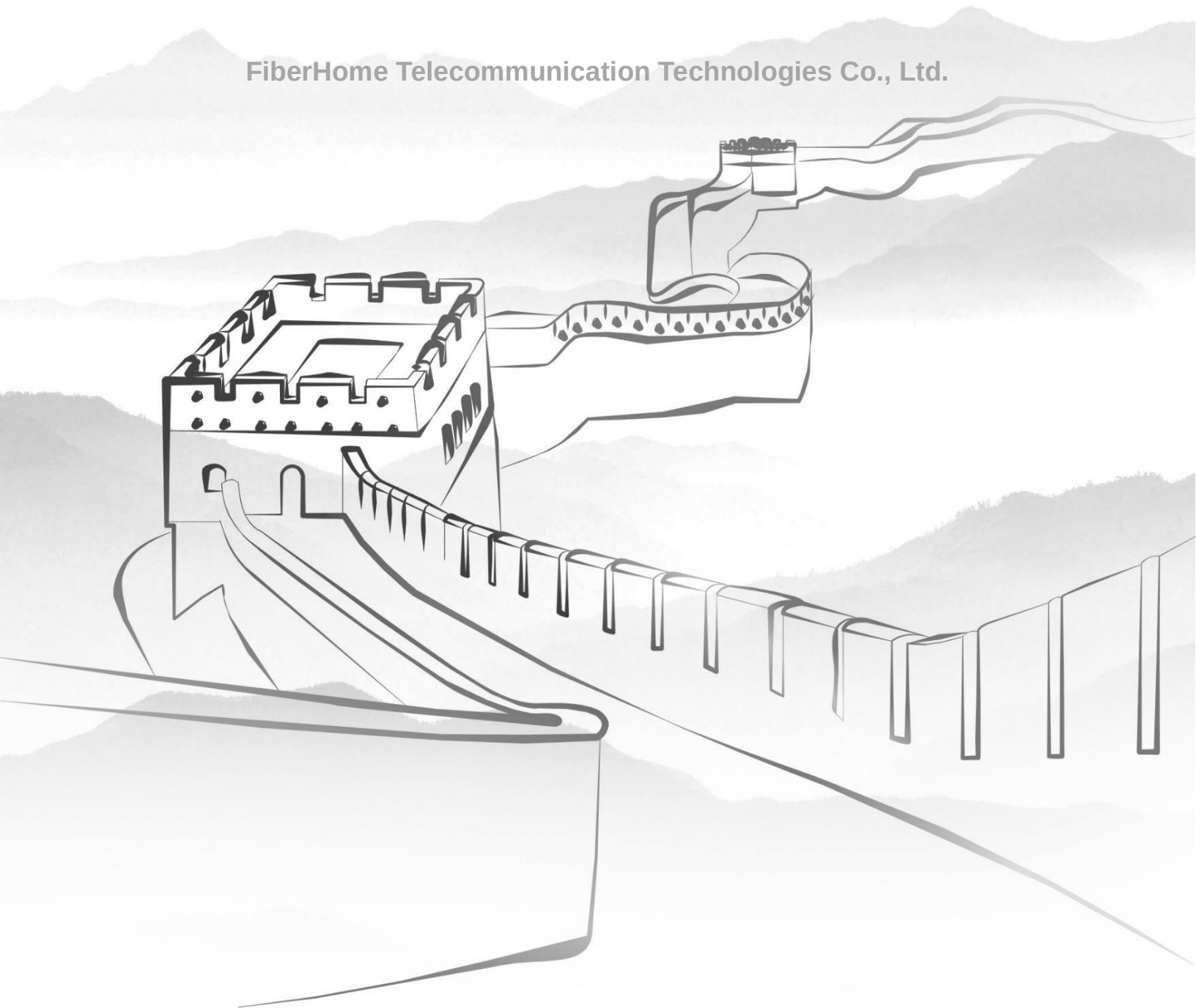


Optical Fiber Cable Specification



FiberHome Telecommunication Technologies Co., Ltd.



ADSS-6/12/24/36/48/72 G.652D SPAN 100

Max Span: 100m Max applied voltage:110kv SAG: 1.0%

Max operating weather conditions: 25m/s wind speed with 0.1mm ice load

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.
- **Aramid Yarn:** Aramid yarn as additional strength member.
- **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	2.0	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	1.5	1.5	1.5	1.5	1.5	1.5
Cable Diameter	mm	9.3±0.3	10±0.3	10±0.3	10±0.3	10±0.3	10±0.3
Cable Weight	kg/km	68±10	77±10	77±10	77±10	77±10	77±10
MAT	N	2300	2500	2500	2500	2500	2500

ADSS-96 G.652D SPAN 100

Max Span: 100m Max applied voltage:110kv SAG: 1.0%
 Max operating weather conditions: 25m/s wind speed with 0.1mm ice load

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.
- **Aramid Yarn:** Aramid yarn as additional strength member.
- **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	1.5
Cable Diameter	mm	11.4±0.3
Cable Weight	kg/km	101±15
MAT	N	2900

Color Code for Fiber and Loose Tube



Cable Performance

Cable performance		
Test	Specified Value	Acceptance Criteria
MAT IEC 60794-1-21, E1	MAT	$\Delta\alpha\leq0.10\text{dB}$, no sheath damage after test
Crush IEC 60794-1-21, E3	1000 N/10cm, 1 min, Plate/Plate	$\Delta\alpha\leq0.10\text{dB}$, no sheath damage after test
Impact IEC 60794-1-21, E4	4.5 J, 1 time/3 points, R=300mm	$\Delta\alpha\leq0.10\text{dB}$, no sheath damage after test
Repeated Bending IEC 60794-1-21, E6	R=25D, 25 cycles, 150N	$\Delta\alpha\leq0.10\text{dB}$, no sheath damage after test
Torsion IEC 60794-1-21, E7	2m, 10 cycles, $\pm180^\circ$, 150N	$\Delta\alpha\leq0.10\text{dB}$, no sheath damage after test
Temperature Cycling IEC 60794-1-22, F1	2 cycles, $-20\sim+70^\circ\text{C}$, 12 h	$\Delta\alpha\leq0.10\text{dB/km}$, 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	$\leq0.35\text{ dB/km}$
	@1383nm	$\leq0.35\text{ dB/km}$
	@1550nm	$\leq0.21\text{ dB/km}$
	@1625nm	$\leq0.23\text{ dB/km}$
Mode field diameter (MFD)	@1310nm	$9.2\pm0.4\text{ }\mu\text{m}$
	@1550nm	$10.4\pm0.5\text{ }\mu\text{m}$
Chromatic dispersion coefficient (IEC 60793-1-42)	1288~1339nm (absolute value)	$\leq3.5\text{ ps/(nm}\cdot\text{km)}$
	1271~1360nm (absolute value)	$\leq5.3\text{ ps/(nm}\cdot\text{km)}$
	@1550 nm	$\leq18\text{ ps/(nm}\cdot\text{km)}$
Zero-dispersion wavelength		1302nm~1322 nm
Zero-dispersion slope		$\leq0.092\text{ ps/(nm}^2\cdot\text{km)}$
Cable cut-off wavelength λ_{cc} (nm)		$\leq1260\text{ nm}$
PMD (for fiber on the reel) (IEC 60793-1-48)		$\leq0.20\text{ ps/km}^{1/2}$
Cladding diameter		$125\pm0.7\text{ }\mu\text{m}$
Cladding non-circularity		$\leq0.60\text{ }\%$
Core/cladding concentricity error		$\leq0.5\text{ }\mu\text{m}$
Proof test		$\geq0.69\text{ GPa (100kpsi)}$

Sheath Marking

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

LinkedPro by FiberHome ADSS XXFO G652D SPAN 100M OCADSSXXCS100 2025 LOT1 Drum *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 -----