

FiberHome Cable Specification

440005619 CABLE TIPO DROP EXTERIOR AÉREO PLANO 2x5MM DE 2 HILOS-G.657.A2



Wuhan FiberHome International Technologies Co., LTD

CABLE TIPO DROP EXTERIOR AÉREO PLANO 2x5MM

DE 2 HILOS-G.657.A2

1. Cable Design

Self-supporting – G.657A2 Fiber, Drop FTTx - Flat aerial – 2x5mm (with messenger)

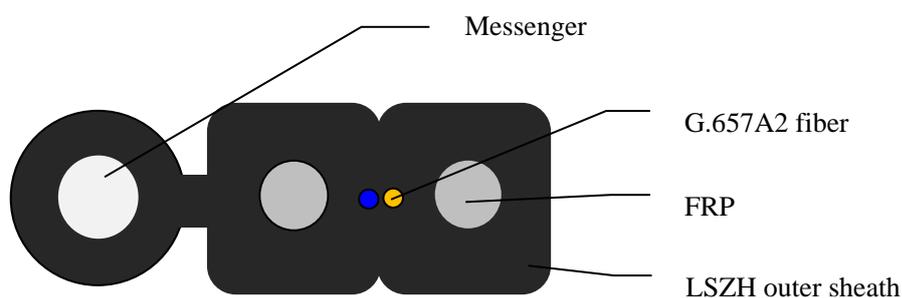


Figure. Cable Cross-Section (A-end)

Item	Material	Description
Messenger	Galvanized steel wire	Galvanized steel wire, Diameter: 1.0mm
Reinforcement Elements	FRP	Two parallel elements along the cable, 2*FRP, Diameter: 0.51±0.1mm
Fiber	G.657A2 (Meet ITU-T G.657A2)	2* 250µm: Blue, Orange EIA/TIA-598
Sheath	LSZH	LSZH, homogeneous black, anti-UV, flame-retardant and not promote growth of fungal, pure polyethylene and non recycled.
Cable Diameter	2.0mm±0.5mm*5.0mm±0.3mm (with messenger)	
Cable Weight	Maximum 25kg/km	
Application	Aerial, for span 80m (SAG≤1%)	
Life span	20 years	
Tensile Strength(short term)	600N	

2.FiberHome®B6-a(G.657A2) single mode fiber characteristics

FiberHome® G.657A2 bending insensitive single mode (monomode) optical fiber has low macro-bending sensitivity and low water peak attenuation. It is comprehensively optimized for use in O-E-S-C-L band. It allows for easy installation and is widely use in access network, FTTx networks and special indoor applications.

It complies with or exceeds the specification of ITU-T recommendation of G.657A2 , the IEC 60793-2-50 B6-a type fiber.

G.657A2 single mode fiber characteristics		
Optics specifications		
Attenuation	@ 1260nm	≤0.47dB/km
	@ 1310nm	≤0.40dB/km
	@ 1383nm	≤0.40dB/km
	@ 1550nm	≤0.30dB/km
	@ 1625nm	≤0.40dB/km
Dispersion	@ 1285nm~1340nm	-3.0ps/(nm·km)~3.0ps/(nm·km)
	@ 1550nm	≤18ps/(nm·km)
	@ 1625nm	≤22ps/(nm·km)
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm ² ·km)
Mode field diameter (MFD) at 1310nm		8.6-9.5μm (Tolerance: ±0.4μm)
PMD	Max. for fiber on the reel	0.2ps/km ^{1/2}
Cable cutoff wavelength λ _{cc} (nm)		≤1260nm
Geometrical characteristics		
Cladding diameter		125±0.7μm
Cladding non-circularity		≤1%
Core/cladding concentricity error		≤0.5μm
Fiber diameter with coating (uncoated)		245±5μm
Cladding/coating concentricity error		≤12.0μm
Curl		≥4m
Mechanical characteristics		
Proof stress		≥0.69GPa
Macrobend loss at 1550nm	Radius: 15mm, 10turns	≤0.03dB
Macrobend loss at 1625nm	Radius: 15mm, 10turns	≤0.1dB

3. Physical, mechanical, environmental, performance and tests

3.1 Mechanical and Environmental Performance of the Cable

The mechanical and environmental performance of the cable shall be in accordance with Table 3.1 below. Unless otherwise specified, all attenuation measurements required in this section shall be performed at 1550nm for single mode fiber.

Table 3.1 The Mechanical and Environmental Performance of the Cable

Item	Test Method	Test Conditions	Acceptance Criteria
Tensile Strength	IEC60794-1-2- E1	L ≥ 50 m Load: 600 N Time: 1min	Additional attenuation ≤ 0.1 dB No visible damage to the surface of out sheath
Abrasion	IEC60794-1-2- E2B	Method 2: Wool felt Load: 5N Stroke length: 100mm 5 times	The marking shall be legible at the completion of the test
Crush Resistance	IEC60794-1-2- E3	Load: 1000N Time: 1 minute Length: 100 mm	Additional attenuation ≤ 0.1dB No visible damage to the surface of out sheath
Impact Resistance	IEC60794-1-2- E4	The impact of weight: 1N Weight high: 1m 3 point , 5 times per point	Additional attenuation ≤ 0.1dB No visible damage to the surface of out sheath
Repeated bending	IEC60794-1-2- E6	Load: 20 N Tests = 300 cycles Each cycle ≈ 2 sec. L = 1.0 m	Additional attenuation ≤ 0.1dB No visible damage to the surface of out sheath
Torsion	IEC60794-1-2- E7	The test length = 1m, ±180 degree, 20 cycles, Test weight 20N	Additional attenuation ≤ 0.1dB No visible damage to the surface of out sheath
Temperature cycling	IEC60794-1-2- F1	Operating Temperature: -20 ° C to +60° C Cycle time: 16h Cycle: 2 Cable length: ≥ 1000 m	Additional attenuation ≤ 0.1 dB/km

3.2 Operating Condition

Item		Performance
Temperature (IEC60794-4-20)	Installation	-20°C to +60°C
	Operation	-20°C to +60°C
	Transportation and storage	-20°C to +60°C

4. Marking and Coil

4.1 Marking of the cover

The following inscriptions will be engraved in 1m intervals, indelibly with sufficient resistance to mechanical abrasion, engraved and painted white.

CNT E.P.

Cable code of the manufacturer.

Identification code of the coil: for example 0001

Sequential marking in meters, starting from zero to the total length of each coil.

Quantity and type of fibers. (2 G.657A2)

Name of manufacturer: FiberHome

Year of manufacture: 2021

4.2 The coil

Robust construction, with sufficient mechanical resistance to avoid damage to the cable during transport and installation, impregnated with non-toxic compounds to ensure its physical integrity. Standard length of cable shall be 1000m per reel with a tolerance of 0% ~ +2%.

4.3 Marking the coil

4.3.1 On each of the wings, the following will be marked: CORPORACIÓN NACIONAL DE TELECOMUNICACIONES CNT E.P. In painted and indelible form:

Name of the manufacturer

Reel number (such as 0001)

Direction of rotation of the coil.

4.3.2 Put cards on the two sides, the following will be painted:

Net length in meters.

Initial and sequential dialing.

Number and type of fibers.(2 G.657A2)

Cable weight and reel.

Identification number of the coil.(such as 0001)

Shipping date.

SAP code(code of CNT).

A plastic card containing recommendations for correct handling of the reel is placed

5. Test data

5.1 Include documentation that certifies that at the factory there will be tests of attenuation and uniformity values in the three windows (1310 nm, 1550nm and 1625 nm), of 100% of the fibers of the coils to be delivered. Prior to delivery-receipt test report must be included from the factory of the aforementioned tests.

5.2 Include documentation that certifies that the following tests are carried out at the factory in accordance with the regulations of the International Electrotechnical Commission (IEC), 60794-1-2: E1, E2B, E3, E4, E6, E7, F1. Prior to delivery-receipt must be included factory test report of the aforementioned tests, of at least 5% of the total amount of each delivery