CFOAC-BLI-A / B-CM-01/02-CO-LSZH

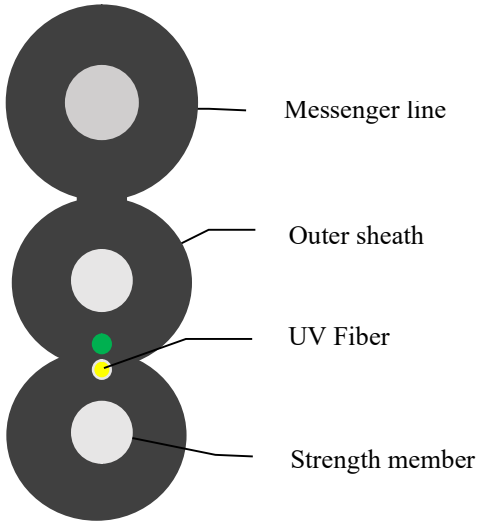
Description

CFOAC-BLI-A/B-CM-01/02-CO-LSZH mainly used from outdoor to indoor. Figure-8 structure. The strength member are easy to strip when they do installation. The messenger wire, provide the tensile strength, support the cable, and two steel wire, as strength member, protected the fiber inside. Flame retardant material (LSZH) is extruded as outer sheath.

Characteristics

- High quality optical fiber provides good transmission performance
- Tight structure provide excellent water blocking function.
- Messenger wire and two steel wires give high tensile strength
- Strict craft and raw material control enable lifespan over 30 years

Cable Cross-Section:



Item	Material	Description
Outer sheath	LSZH	Colors of sheath: black
Strength member	Steel wire	Strength member
Fiber	Silicon-based fiber (G.657A1)	UV fiber colored with: Green, yellow
Messenger line	Steel wire	Strength member

Serial No.	Item	Requirement
Cable Diameter	mm	2.0*5.1mm
Cable Weight	Kg/km	20kg/km
Allowable tensile strength (N)		660N
Allowable crush resistance (N)		1000N/10cm
Operation temperature		-20º C～ +65 º C

1. General

1.1 This specification covers the requirements for the supply of single-mode optical fiber cables.

1.2 This single mode optical fiber cable shall comply with the requirements of this specification and ITU-T G.657.

2. Fiber characteristics

The optical, geometrical, mechanical and environmental performance of the optical fiber shall be in accordance with tables 2.1.

The manufacture is FiberHome.

Table 2.1 G.657A1 fiber characteristics

G.657A1 fiber characteristics		
Optics specifications		
Attenuation	@1310nm	Max value＜0.36dB/km
	@1550nm	Max value＜0.22dB/km
Dispersion	@1285nm～1330nm	-3.5ps/(nm·km)～3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
Zero-Dispersion wavelength		1300nm～1324nm
Zero-Dispersion slope		≤0.092ps/(nm^2·km)
Mode field diameter (MFD) at 1310nm		8.6±0.4μm
PMD	Max. for fiber on the reel	0.125ps/km$^{1/2}$
Cable cutoff wavelength λ_{cc}(nm)		≤1260nm
Effective group index（N_{eff}）@1310nm		1.4683
Effective group index（N_{eff}）@1550nm		1.4688
Back scatter characteristics(at 1310nm&1550nm)		

Point discontinuity		≤0.05dB
Attenuation uniformity		≤0.05dB/km
Attenuation coefficient difference for bi-directional measurement		≤0.05dB/km
Geometrical characteristics		
Cladding diameter		125±1.0μm
Cladding non-circularity		≤0.8%
Core/cladding concentricity error		≤0.6μm
Fiber diameter with coating (uncolored)		245±10μm
Cladding/coating concentricity error		≤12.0μm
Curl		≥4m
Mechanical characteristics		
Proof stress		≥0.69GPa(100kpsi)
Dynamic stress corrosion susceptibility parameter(typical value)		≥20
Macro bend loss at 1550nm	Φ20mm,1turn	≤0.75dB
	Φ30mm,10turns	≤0.25dB
Macro bend loss at 1625nm	Φ20mm,1turn	≤1.5dB
	Φ30mm,10turns	≤1.0dB
Environmental characteristics (at 1310nm & 1550nm)		
Temperature induced attenuation(-60~+85℃)		≤0.05dB/km
Dry heat induced attenuation (85℃±2℃,30 days)		≤0.05dB/km
Water immersion induced attenuation(23℃±2℃, 30 days)		≤0.05dB/km
Damp heat induced attenuation(85℃±2℃,RH85%,30 days)		≤0.05dB/km

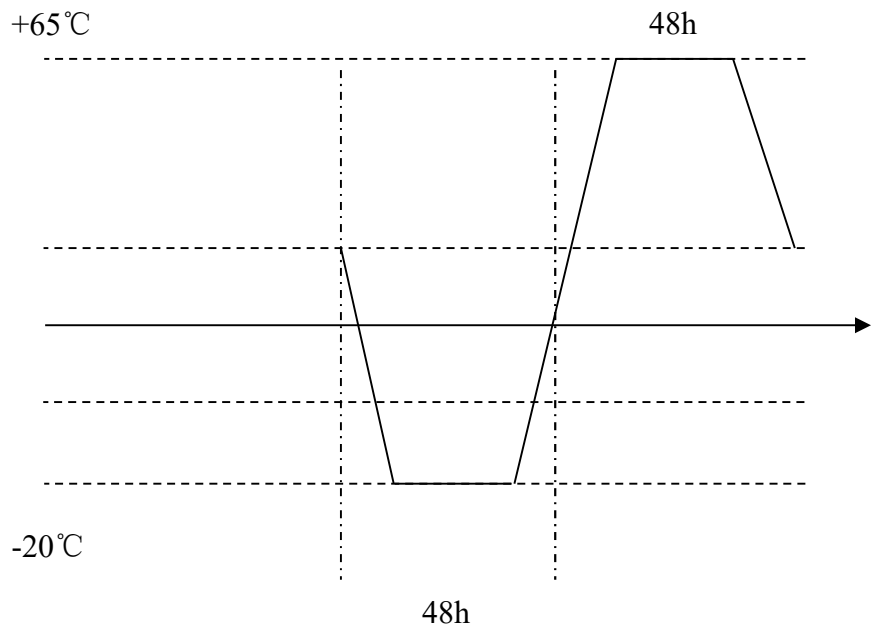
3. PHYSICAL, MECHANICAL, ENVIRONMENTAL, PERFORMANCE AND TESTS

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.

Table3.1: The Mechanical and Environmental Performance of the Cable

Item	Test Method	Test Conditions	Acceptance Criteria
Temperature cycling	NBR 13510	Operating Temperature: -20 º C to +65 º C Cycle time:48h Cycle:4	Additional attenuation ≤0.4 dB/km



Item	Test Method	Test Conditions	Acceptance Criteria

Tensile Strength	NBR13512	L ≥ 150 m Load: 660N	Fiber deformation≤0.6% Additional attenuation≤0.4 dB No visible damage to the surface of out sheath
Crush Resistance	NBR13507	Load：1000N Length: 100 mm	Additional attenuation≤0.4dB No visible damage to the surface of out sheath
Impact Resistance	NBR13509	The impact of weight: depend on diameter of cable Weight high: 150mm , 3 point , 25 times per point Impact rate: 30 times/minute	No fiber breakage No visible damage to the surface of out sheath
Repeated bending	NBR 13518	Load: 20 N Tests = 25 cycles Bending rate: 30 cycles/minute	Additional attenuation≤0.4dB No visible damage to the surface of out sheath
Bending	NBR 13508	NO. of turns:5 Cycles: 1	Additional attenuation≤0.4dB No visible damage to the surface of out sheath

Packing and Marking

4.1 Cable Packing

Standard length of cable shall be 2,000m (or other drum length) per reel with a tolerance of ±1%. Other cable lengths are also available if requested by customer.

Each length of the cable shall be wound on a separate wooden reel.

Both ends of the cable shall be sealed with suitable plastic caps to prevent the entry of moisture during shipping, handling and storage.

The cable ends shall be securely fastened to the reel to prevent the cable from becoming loose in transit or during placing operations.

The inner end of the cable is housed into a slot on the side of the reel without extra cable length for testing.

Wood-fiber board shall be secured with steel bands to protect the cable during normal handling and shipping.

4.2 Cable Reel

4.4.1 Details given below shall be distinctly marked with a weather-proof material on both outer sides of the reel flange:

1).Purchaser's name
2).Reel number
3).Name of the manufacturer
4).Year of manufacture
5).Arrow showing the direction the drum shall be rolled
6).An identification label according to drawing AMI03- 428

4.2.2 Other shipping mark is also available if requested by customer.

4.2.3 The cable shall be shipped on reels designed to prevent damage to the cable during shipment and installation.

4.2.4 The arbor holes provided in the reels shall be approximately 60 mm with a wood or steel hub in the arbor hole (in lieu of fiberboard).