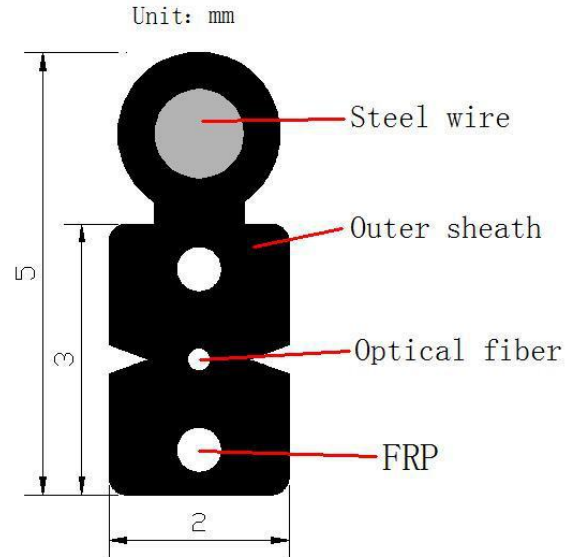

Outdoor FTTH Drop Cable GJYFXCH

Cable Design



Cable structure and parameters

No. of optical fiber			1
Optical Fiber Model			G.657A2
Fiber color			Red
Strength member	Material	G-FRP	
	Diameter (± 0.03) mm	0.50	
	No.	2pcs	
Messenger	Material	Steel wire	
	Diameter (± 0.03) mm	1.0	
Outer Sheath	Material	LSZH	
	Color	Black	
Cable size (± 0.2) mm			2.0×5.0
Cable Weight (± 2) kg/km			18.5
Allowable Tensile Strength	Short Term	N	600
	Long Term		300
Allowable Crush Resistance	Short Term	N/100mm	2200
	Long Term		1000
Min. bending radius	Without Tension	$10 \times \text{Cable-}\phi$	
	Under Maximum Tension	$20 \times \text{Cable-}\phi$	
Temperature range (°C)	Installation	$-20 \sim +60$	
	Transport&Storage	$-40 \sim +70$	
	Operation	$-40 \sim +70$	

The properties of single mode optical fiber (ITU-T Rec. G.657A2)

Characteristic	condition	data	unit
Optical properties			
Attenuation	1310nm	≤ 0.35	dB/km
	1383nm(氢老化后)	≤ 0.35	dB/km
	1490nm	≤ 0.23	dB/km
	1550nm	≤ 0.22	dB/km
	1625nm	≤ 0.23	dB/km
Relative wavelength attenuation @1310nm @1550nm	1285 ~ 1330nm	≤ 0.05	dB/km
	1525 ~ 1575nm	≤ 0.05	dB/km
Dispersion in the wavelength range of	1285 ~ 1340nm	≤ 3.5	ps/(nm.km)
	1550nm	≤ 18	ps/(nm.km)
Zero dispersion wavelength		1300 ~ 1324	nm
A zero-dispersion slope		≤ 0.092	ps/(nm ² .km)
Polarization Mode Dispersion Coefficient PMD Single fiber maximum Fiber link value (M=20, Q=0.01%) Typical value		≤ 0.2 ≤ 0.1 0.04	ps/ ps/ ps/
Cable cut-off wavelength (λ_{cc})		≤ 1260	nm
Mode field diameter (MFD)	1310nm	8.8±0.4	μm
	1550nm	9.8±0.5	μm
Attenuation discontinuities	1310nm	≤ 0.05	dB
	1550nm	≤ 0.05	dB
Geometric characteristics			
Core diameter		125±0.7	μm
Cladding roundness		≤ 0.7	%
Coating diameter		245±5	μm
Coating / package concentricity error		≤ 12.0	μm
Core / package concentricity error		≤ 0.5	μm
The warpage (radius)		≥ 4	m
Environmental characteristics (1310nm、1550nm、1625nm)			
Temperature additional attenuation	-60℃ ~ +85℃	≤ 0.05	dB/km
Temperature-humidity cycle additional attenuation	-10℃ ~ +85℃, 98% Relative humidity	≤ 0.05	dB/km
Flooding additional attenuation	23℃, 30 days	≤ 0.05	dB/km
Hot and humid additional	85℃ 和 85% Relative	≤ 0.05	dB/km

attenuation	humidity, 30 days		
Dry heat aging	85°C	≤0.05	dB/km
Mechanical properties			
Screening tension		≥9.0	N
The macro bend Additional attenuation			
10 CircleΦ30mm	1550nm	≤0.025	dB
10 CircleΦ30mm	1625nm	≤1.0	dB
1 CircleΦ20mm	1550nm	≤0.75	dB
1 CircleΦ20mm	1625nm	≤1.5	dB
Coating peeling force	Typical average	1.5	N
Dynamic fatigue parameters		≥20	

Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 794-1-2-E1	- Load: Short term tension - Length of cable: about 50m	- Fiber strain ≤ 0.36% - Loss change ≤ 0.1 dB @1550 nm - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - 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/T901-2001-4.4.1	- Temperature step: +20°C→-40°C→+70°C→+20°C - 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 color of marking is white, but if the remarking is necessary, the **white color** marking shall be printed newly on a different position.

An occasional unclear of length marking is permitted if both of the neighboring markings are clear.

The both cable ends are sealed with heat shrinkable end caps to prevent water ingress.