



Indoor|Outdoor Fiber Optic Cable|12Cores Loose-Tube 250um FTTH Drop Cable Singlemode G657A1 LSZH

Cable Design



Technical data

No. of cable			12
Fiber Model			G657A2
Strength Member	Material		Glass Yarn
Loose Tube	Material		PBT
	Diameter (±0.06) mm		2.0
	Thickness (±0.03) mm		0.35
	The Max.Core NO./Tube		12
Attenuation	850nm	dB/km	2.7
	1300nm		0.75
Outer Sheath	Material		MDPE
	Thickness (±0.2) mm		1.2
Cable Diameter			6.0
Cable Wetght			40
Min. bending radius	Without Tension		10.0×Cable-φ
	Under Maximum Tension		20.0×Cable-φ
Temperature range (℃)	Installation		-20~+60
	Transport&Storage		-40~+70
	Operation		-40~+70

Fibre Colours

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

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



Characteristic	condition	data	unit
Optical properties			
Attenuation	1310nm 1383nm 1490nm 1550nm 1625nm	≤0.35 ≤0.35 ≤0.23 ≤0.22 ≤0.23	dB/km dB/km dB/km dB/km dB/km
Relative wavelength attenuation @1310nm @1550nm	1285~1330nm 1525~1575nm	≤0.05 ≤0.05	dB/km dB/km
Dispersion in the wavelength range of	1285~1340nm 1550nm	≤3.5 ≤18	ps/(nm.km) 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 1550nm	8.8±0.4 9.8±0.5	μm μm
Attenuation discontinuities	1310nm 1550nm	≤0.05 ≤0.05	dB 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 attenuation	85℃和 85% Relative humidity, 30 days	≤0.05	dB/km
Dry heat aging	85℃	≤0.05	dB/km
Mechanical properties			
Screening tension		≥9.0	N



The macro bend Additional attenuation			
10 CircleΦ30mm	1550nm	≤0.03	dB
10 CircleΦ30mm	1625nm	≤0.1	dB
1 CircleΦ20mm	1550nm	≤0.1	dB
1 CircleΦ20mm	1625nm	≤0.2	dB
1 CircleΦ15mm	1550nm	≤0.5	dB
1 CircleΦ15mm	1625nm	≤1.0	dB
Coating peeling force	Typical average	1.5	N
Dynamic fatigue parameters		≥20	

Application:

NO.	Item		Requirement
1	Allowable Tensile Strength	Short Term	2000 N
		Long Term	800 N
2	Allowable Crush Resistance	Short Term	1000 (/100mm)
		Long Term	300 (/100mm)

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.