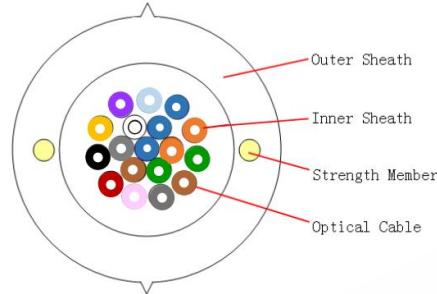




All-dielectric Fiber Optic Cable| GJPFH Micro-tube Building Vertical Wiring

2-288 Cores G652D G657A1 FR LSZH Black|White

Cable Design



Technical data

No. of cable		4	8	16	24
Fiber Model		G.657A1			
Module	Material	LSZH			
	Thickness	0.17 (±0.02) mm			
	Diameter	0.9 (±0.05) mm			
Strength Member	Material	FRP			
	Diameter	1.0 (±0.05) mm			
	No.	2			
Outer Sheath	Material	LSZH-FR			
	Color	White Black			
Cable Diameter		8.5±0.5	8.5±0.5	11.5±0.5	11.5±0.5
Cable Weight (±2) kg/km		75	80	125	125
Max. allowable tension (Short-term)		600N			
Max. allowable tension (Long-term)		200N			
Crush resistance test		1000N/10cm			
Temperature range (°C)	Installation	-5~+60			
	Transport&Storage	-40~+70			
	Operation	-5~+60			

Tight lines 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
No.	13	14	15	16	17	18
Color	Blue+P	Orange+P	Green+P	Brown+P	Gray+P	White+P
No.	19	20	21	22	23	24
Color	Red+P	Natural+P	Yellow+P	Violet+P	Pink+P	Aqua+P



## The properties of single mode optical fiber (ITU-T Rec. G.657A1)

Characteristic	condition	data	unit
<b>Optical properties</b>			
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 <sup>2</sup> .km)
Polarization Mode Dispersion Coefficient PMD Single fiber maximum Fiber link value (M=20, Q=0.01%) Typical value		≤0.2	ps/
		≤0.1	ps/
		0.04	
			ps/
Cable cut-off wavelength (λ <sub>cc</sub> )		≤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
<b>Geometric characteristics</b>			
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
<b>Environmental characteristics (1310nm、1550nm、1625nm)</b>			
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
<b>Mechanical properties</b>			
Screening tension		≥9.0	N
The macro bend Additional attenuation 10 CircleΦ30mm			



10 CircleΦ30mm	1550nm	≤0.025	dB
1 CircleΦ20mm	1625nm	≤1.0	dB
1 CircleΦ20mm	1550nm	≤0.75	dB
	1625nm	≤1.5	dB
Coating peeling force	Typical average	1.5	N
Dynamic fatigue parameters		≥20	

### The properties of single mode optical fiber (ITU-T Rec. G.652.D)

Item	Specification
Fiber type	Single mode
Fiber material	Doped silica
Attenuation coefficient	
@ 1310 nm	≤ 0.36 dB/km
@ 1383 nm	≤ 0.32 dB/km
@ 1550 nm	≤ 0.22 dB/km
@ 1625 nm	≤ 0.30 dB/km
Point discontinuity	≤ 0.05 dB
Cable cut-off wavelength	≤ 1260 nm
Zero-dispersion wavelength	1300 ~ 1324 nm
Zero-dispersion slope	≤ 0.092 ps/(nm <sup>2</sup> .km)
Chromatic dispersion	
@ 1288 ~ 1339 nm	≤3.5 ps/(nm. km)
@ 1271 ~ 1360 nm	≤5.3 ps/(nm. km)
@ 1550 nm	≤18 ps/(nm. km)
@ 1625 nm	≤22 ps/(nm. km)
PMD <sub>Q</sub> (Quadrature average*)	≤0.2 ps/km <sup>1/2</sup>
Mode field diameter @ 1310 nm	9.2±0.4 μm
Core / Clad concentricity error	≤ 0.5 μm
Cladding diameter	125.0 ± 0.7 μm
Cladding non-circularity	≤1.0%
Primary coating diameter	245 ± 10 μm
Proof test level	100 kpsi (=0.69 Gpa), 1%
Temperature dependence 0°C~ +70°C @ 1310 & 1550nm	≤ 0.1 dB/km

### 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.

The outer sheath is marked 1 metre intervals