

# STRUCTURE CABLING OPTICAL FIBER

## Indoor Soft Optical Fiber Cable(GJFJH)



D171/D172

### Introduction

Two 900 $\mu$ m Buffered Fibers are surrounded by aramid yarn strength members and a flame-retardant jacket.

### Cable structure and parameter

SN	Item	Unit	Value
1	No. of fibers	count	12
2	Tight buffer material		LSZH
3	Tight buffer Color		Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Purple, Pink, Aqua
4	Strength member		Aramid yarns
5	Tight buffer diameter	mm	0.9 $\pm$ 0.05
6	Jacket thickness	mm	0.75
7	Cable diameter	mm	5.6
8	Cable weight	kg/km	28
9	Short term tension	N	660
10	Short term crush	N/100mm	1000

Note: Mechanical sizes are nominal values.

### G652D fiber information

- Mode field diameter (1310nm):9.2 $\mu$ m $\pm$ 0.4 $\mu$ m.
- Mode field diameter (1550nm):10.4 $\mu$ m $\pm$ 0.8 $\mu$ m.
- Cladding diameter:125 $\mu$ m $\pm$ 1.0 $\mu$ m.
- Coating diameter:245 $\mu$ m $\pm$ 7 $\mu$ m.
- Cut off wavelength of cabled fiber ( $\lambda_{cc}$ ): $\leq$ 1260 $\mu$ m.
- Attenuation at 1310nm: $\leq$ 0.35dB/km.
- Attenuation at 1550nm: $\leq$ 0.21dB/km.
- Bending loss at 1550nm (100 turns, 30mm radius): $\leq$ 0.05dB.
- Dispersion in the range 1288 to 1339nm: $\leq$ 3.5ps/(nm $\cdot$ km).
- Dispersion at 1550nm: $\leq$ 18ps/(nm $\cdot$ km).
- Dispersion slope at zero dispersion wavelength: $\leq$ 0.092ps/(nm $^2$  $\cdot$ km).



LSZH jacket  
Tight buffered optical fiber  
Aramid Yarn strength member  
Tight Buffered

### Characteristic of Optical Cable

Mechanical characteristic and test method		
Tensile strength	conform to IEC 60794-1-2-E1A	
Crush	conform to IEC 60794-1-2-E3	
Impact	conform to IEC 60794-1-2-E4	
Repeated bending	conform to IEC 60794-1-2-E6	
Torsion	conform to IEC 60794-1-2-E7	
Flexing	conform to IEC 60794-1-2-E8	
Cable bend	conform to IEC 60794-1-2-E11	
Water penetration	conform to IEC 60794-1-2-F5B	
Temperature requirement	Operation	-20 $^{\circ}$ C~+85 $^{\circ}$ C
	Installation	-10 $^{\circ}$ C~+70 $^{\circ}$ C
	Storage/transportation	-40 $^{\circ}$ C~+85 $^{\circ}$ C
Temperature cycling test	conform to IEC 794-1-F1	
Bending Radius	Unloaded	10 times of outer diameter
	loaded	20 times of outer diameter

### Order Information

Item	Specification	Description
D171	2-12 cores	Single Mode
D172	2-12 cores	Multimode