

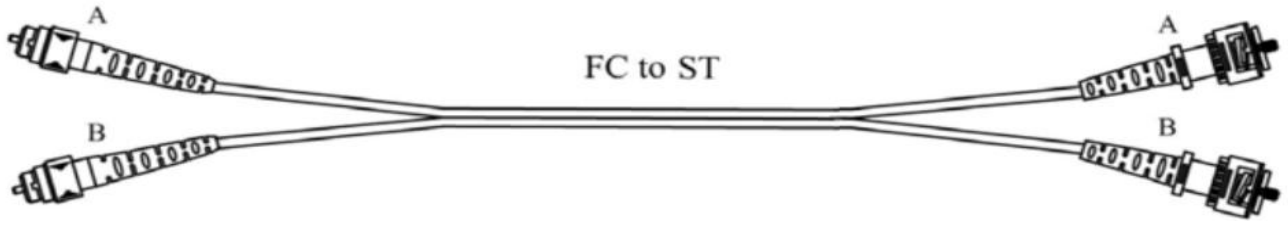
## Fiber Optic Patch Cord| Fiber Optical Patchcord FC-ST Duplex Multimode OM1 2.0MM LSZH Orange

### Fiber Cable

Unitek Fiber provide patch cord. Patch cord means that the terminations are connect at both ends of the optical cable to realize the optical path active connection. Optical Fiber Patch cord is similar to coaxial cable except that there is no mesh shield. The light-transmitting glass core is in the central. The fiber core has a diameter of 9/125um 50/125 $\mu$ m and 65/125 $\mu$ m for SM and multi mode fiber path cord, which is roughly equivalent to the thickness of a human hair. The diameter for single mode fiber core is 8 $\mu$ m to 10 $\mu$ m. The fiber core is wrapped by a glass which is having a lower index of refraction than the core to maintain the fiber within the core.

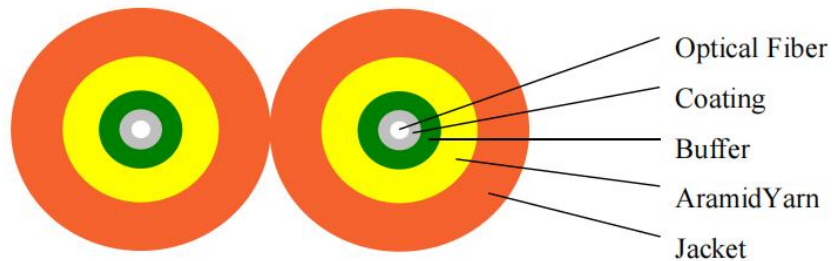


### Drawings:



Model		SM
Connector A : FC		
Insertion Loss	Standard	$\leq 0.3\text{dB}$
Return Loss		$\text{PC} \geq 35\text{dB}$
Durability(500 Matings)		$\leq 0.2\text{dB}$
Test Wavelength		850nm&1300nm
Connector B:ST		
Insertion Loss	Standard	$\leq 0.3\text{dB}$
Return Loss		$\text{PC} \geq 35\text{dB}$
Durability(500 Matings)		$\leq 0.2\text{dB}$
Test Wavelength		850nm&1300nm

### Cable Structure Diagram



### Cable Dimensions and Constructions

Items		Descriptions
Optical Fiber	Fiber count	2
	Color	Optical Fiber Chromatography
	Diameter	850±50µm
Strength Member	Material	Aramid yarn
Sheath	Material	LSZH
	Color	Orange
	Diameter	2.0±0.10mm

### Mechanical and Environmental Characteristics

Items	Descriptions	
Crush Resistance	short-term	1000N/100mm
	long-term	200N/100mm
Min.Bend Radius (Dynamic)	mm	50
Min.Bend Radius (Static)	mm	30
Operating Temperature	- 2 0 C--+ 6 0 C	
Temperature Range	- 2 0 C--+ 6 0 C	

### Fiber Attenuation

#### The properties of multimode optical fiber (ITU-T Rec. OM1)

Characteristic	Condition	Data	Unit
<b>Optical properties</b>			
Attenuation	850nm	≤2.7	dB/km
	1300nm	≤0.6	dB/km
Full injection bandwidth	850nm	≥200	MHz•Km
	1300nm	≥500	MHz•Km
Numerical aperture		0.275±0.015	
Zero dispersion wavelength		1320-1365	nm
A zero-dispersion slope	1320-1348nm	≤0.11	ps/(nm <sup>2</sup> .km)
	1348-1365nm	≤0.001	ps/(nm <sup>2</sup> .km)
Group refractive index	850nm	1.496	
	1300nm	1.491	
The macro bend additional attenuation 100 CircleΦ75mm	850nm	≤0.5	dB
	1300nm	≤0.5	dB

<b>Geometric characteristics</b>			
Core diameter		62.5±2.5	μm
Core roundness		≤5.0	%
Cladding diameter		125.0±1.0	μm
Cladding roundness		≤1.0	%
Coating diameter		245±7	μm
Coating roundness		≤6.0	%
Coating / package concentricity error		≤10.0	μm
Core / package concentricity error		≤1.5	μm
Fiber length		≤17.6	Km/axis
<b>Backscatter characteristics(1300nm)</b>			
Steps( Mean value of two-way measurement)		≤0.1	dB
The irregularity of the length direction and the discontinuity of the point		≤0.1	dB
Attenuation inhomogeneity		≤0.1	dB/km
<b>Environmental characteristics (850nm、1300nm)</b>			
Temperature additional attenuation	-60°C ~+85°C	≤0.1	dB/km
Temperature-humidity cycle additional attenuation	-10°C ~+85°C, 4%~98% Relative humidity	≤0.1	dB/km
Flooding additional attenuation	23°C, 30 days	≤0.1	dB/km
Dry heat additional attenuation	85°C, 30 days	≤0.1	dB/km
Hot and humid additional attenuation	85°C and 85% Relative humidity, 30 days	≤0.1	dB/km
<b>Mechanical properties</b>			
Screening tension		≥9.0	N
		≥1.0	%
		≥100	kpsi
Coating peeling force	Typical average	1.5	N
	Peak value	≥1.3 ≤8.9	N
Dynamic fatigue parameters( Nd,Typical value)		27	