

IP67 Mini-SC Waterproof Patch Cord Datasheet

Ideal for outdoor FTTH projects.



• Description

Mini-SC is a new outdoor waterproof fiber optic connector, it's mainly used for FTTH outdoor installation. It's small and easy to be installed, and the grade can be IP67. Now there're three types of such Mini-SC connector: Huawei, Corning- later Amphenol will be its foundry, so the third one is Amphenol. Mini-SC waterproof connector has SC houseless core, spiral bayonet and multilayer rubber cushions. It's suitable for $\Phi 3.0-5.0\text{mm}$ round cables and FTTH drop cable.

• Features

- Good repeatability and interchangeability
- Perfect solution for installs that require CE/CPR/ISO/ROHS \checkmark
- 100% 3D tested/Temperature tested/Loss tested before delivery
- High and low temperature cycle test
- RoHS and REACH materials compliant.
- Cable diameter Range: 2.0*3.0mm, 2.0*5.0mm, 3.0mm, 5.0mm to 4.0* 7.0mm

• Cable structure



- Technical Specifications

Item	Parameter
Fiber Cable Type	Simplex
Fiber Mode	Single-mode; Multimode
Fiber Brand	Corning/YOFC/Customized
Connector A	Mini-SC
Connector B	Mini-SC
Polish Type	APC/UPC
Cable Jacket	PVC/LSZH
Jacket Color	Yellow/Black
Outer Cable Diameter(mm)	2.0*3.0mm, 2.0*5.0mm, 3.0mm, 5.0mm to 4.0* 7.0mm
Minimum Bending Radius	15D/30D(Static/Dynamic)

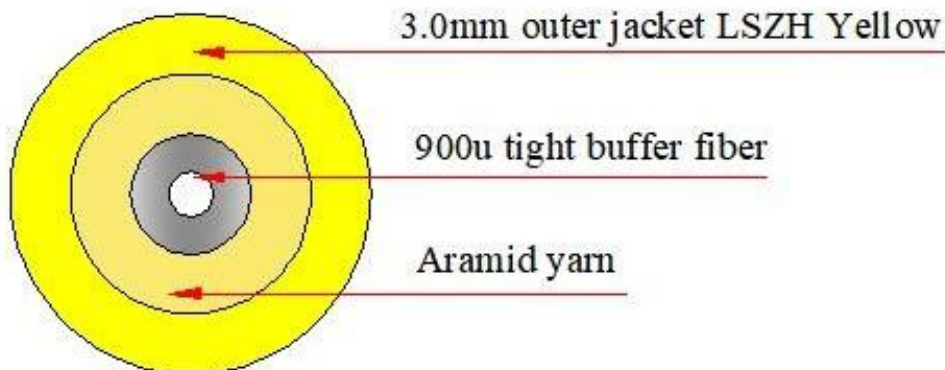
Optical Testing	Parameter
Insertion Loss(dB)	<0.25
Return Loss(dB)	Singlemode:≥60dB(APC);≥50(UPC); Multimode:≥30dB
Wavelength(nm)	Single-mode: 1310/1550; Multi-mode:850/1300
Operating Temperature(°C)	-40~85
Storage Temperature(°C)	-20~70

- Tips:

In order to make the customers know us more, please visit our VR factory, it is just like you were really standing in our factory.

OPTICO Fiber Assemblies Production Line VR :<https://www.linked-reality.com/company/15555/en>

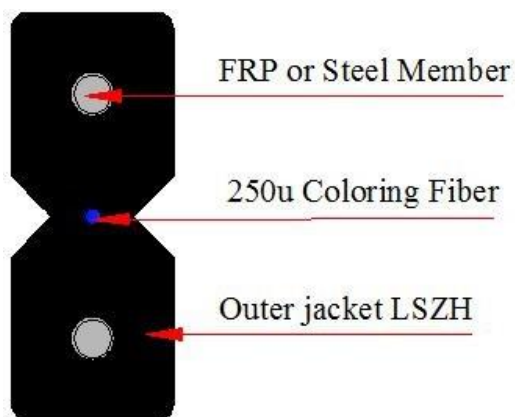
- Cable Options
 - Cable Structure version1



- Cable Parameter

Cable Count	Our sheath diameter(mm)	Weight(KG)	Min. allowable Tensile Strength(N)		Min. allowable Crush Load(N/100m)		Min. Bending Radius(MM)		Storage temperature(°C)
1	3.0±0.1	6.5	450	200	500	100	20D	10D	-20~+60

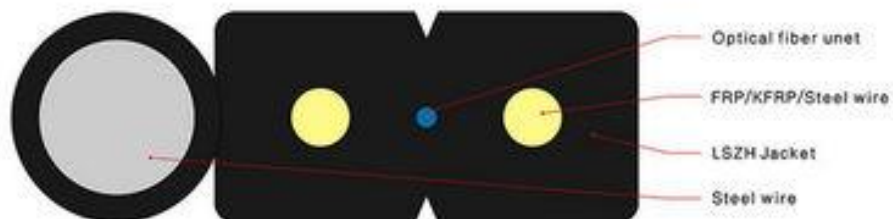
- Cable Structure version2



- Cable Parameter

Cable Count	Our sheath diameter(mm)	Weight(KG)	Min. allowable Tensile Strength(N)		Min. allowable Crush Load(N/100m)		Min. Bending Radius(MM)		Storage temperature(°C)
1	(2.0±0.1)× (3.0±0.2)	8	100	50	500	100	20D	10D	-20~+70

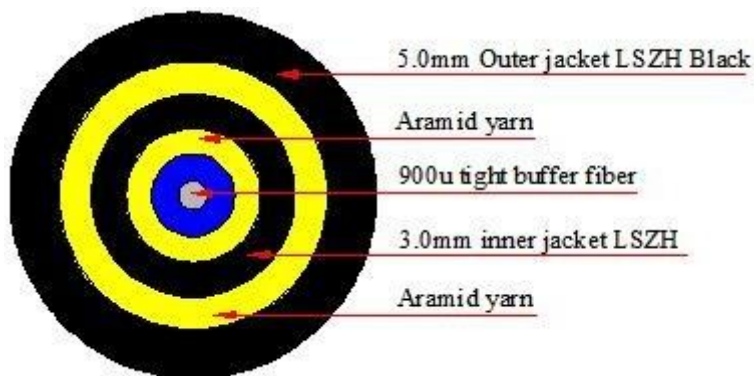
- Cable Versions
 - Cable Structure version3



- Cable Parameter

Cable Count	Our sheath diameter(mm)	Weight(KG)	Min. allowable Tensile Strength(N)		Min. allowable Crush Load(N/100m)		Min. Bending Radius(MM)		Storage temperature(°C)
			400	200	2200	1000	20D	10D	
1	(2.0±0.2)± (5.0±0.3)	21.8	400	200	2200	1000	20D	10D	-20~+60

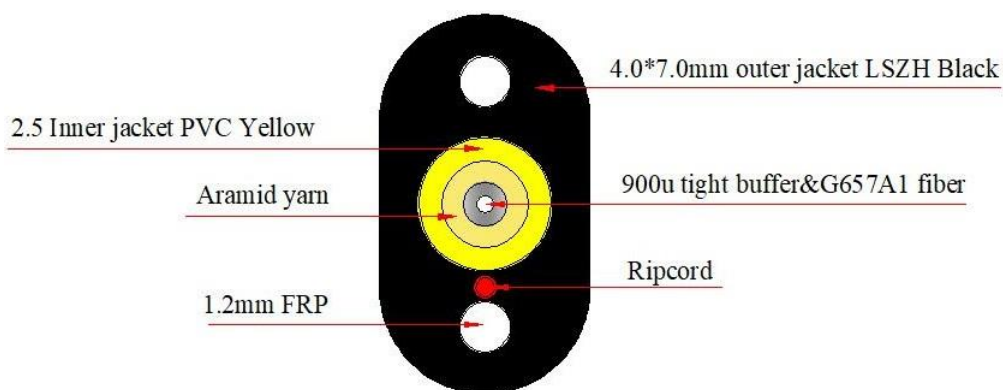
- Cable Structure version4



- Cable Parameter

Cable Count	Our sheath diameter(mm)	Weight(KG)	Min. allowable Tensile Strength(N)		Min. allowable Crush Load(N/100m)		Min. Bending Radius(MM)		Storage temperature(°C)
			800	400	2000	1000	20D	10D	
1	5.0±0.2	26.5	800	400	2000	1000	20D	10D	-20~+60

• Cable Structure version5



• Cable Parameter

Cable Count	Our sheath diameter(mm)	Weight(KG)	Min. allowable Tensile Strength(N)		Min. allowable Crush Load(N/100m)		Min. Bending Radius(MM)		Storage temperature(°C)
1	(4.0±0.2)×(7.0±0.2)	42	1350	400	2200	1000	20D	10D	-20~+60

• Optical Characteristics Overview

Item	Parameter		Reference
	Single-mode	Multi-mode	
Insertion Loss(dB)	Typically ≤0.15dB; Max. ≤0.25dB	Typically ≤0.15dB; Max. ≤0.25dB	IEC 61300-3-34
Return Loss(dB)	≥60dB(APC) ≥50dB(UPC)	≥30dB(UPC)	IEC 61300-3-6

• End-Face Geometry(SC)

Item	UPC (Ref: IEC 61755-3-1)	APC (Ref: IEC 61755-3-2)
Radius of curvature (mm)	10 to 25	5 to 12
Fiber height (nm)	-100 to 100	-100 to 100
Apex offset (μm)	0 to 50	0 to 50
APC angle (°)	/	8° ±0.2°
Key error (°)	/	0.2° max

• End-Face Quality(Multi-mode)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 65	None	None	IEC 61300-3-35:2015
B: Cladding	65 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

• End-Face Quality(Single-mode)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 25	None	None	IEC 61300-3-35:2015
B: Cladding	25 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

• Mechanical Characteristics Characteristic Overview

Test	Conditions	Reference
Endurance	500 matings	IEC 61300-2-2
Vibration	Frequency: 10 to 55Hz, Amplitude: 0.75mm	IEC 61300-2-1
Cable retention	400N (main cable); 50N (connector part)	IEC 61300-2-4
Strength of coupling mechanism	80N for 2 to 3mm cable	IEC 61300-2-6
Cable torsion	15N for 2 to 3mm cable	IEC 61300-2-5
Fall	10 drops, 1m drop height	IEC 61300-2-12
Static lateral load	1N for 1h (main cable); 0.2N for 5min (ranch part)	IEC 61300-2-42
Cold	-25°C, 96h duration	IEC 61300-2-17
Dry heat	+70°C, 96h duration	IEC 61300-2-18
Change of temperature	-25°C to +70°C, 12 cycles	IEC 61300-2-22
Humidity	+40°C at 93%, 96h duration	IEC 61300-2-19