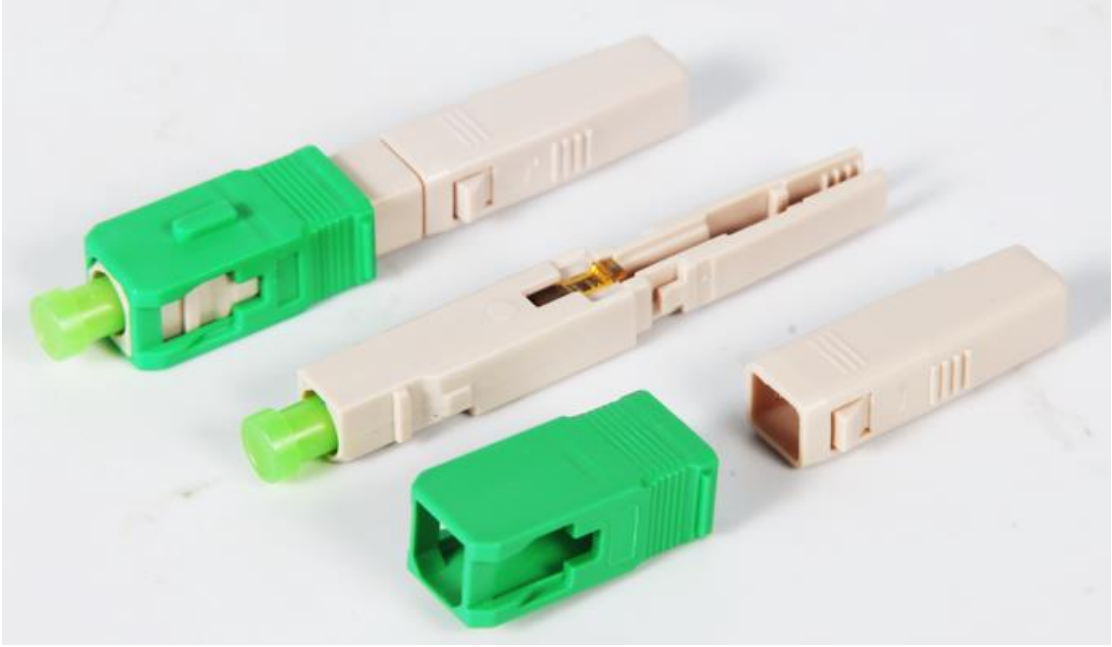
Specification for QSC49Z1-UPC/APC

SC/APC Field Installable Connector

(FIC Type 49)



Draft	Audit	Approve
Liu Jian	Lu Hongyu	Huang Xiaoyu

Revision List

Revise Date	Author	Document Rev.	Modification Record
2019-05-10	Xu Jinhai	V1.0	First writing
2021-2-12	Liu Hongyu	V2.0	Add more detailed description & modify format
2022-08-11	Liu Jian	V2.0A	Update LOGO
2023-02-15	Liu Hongyu	V2.0B	Update cable lock to support 2.0x1.6mm cable

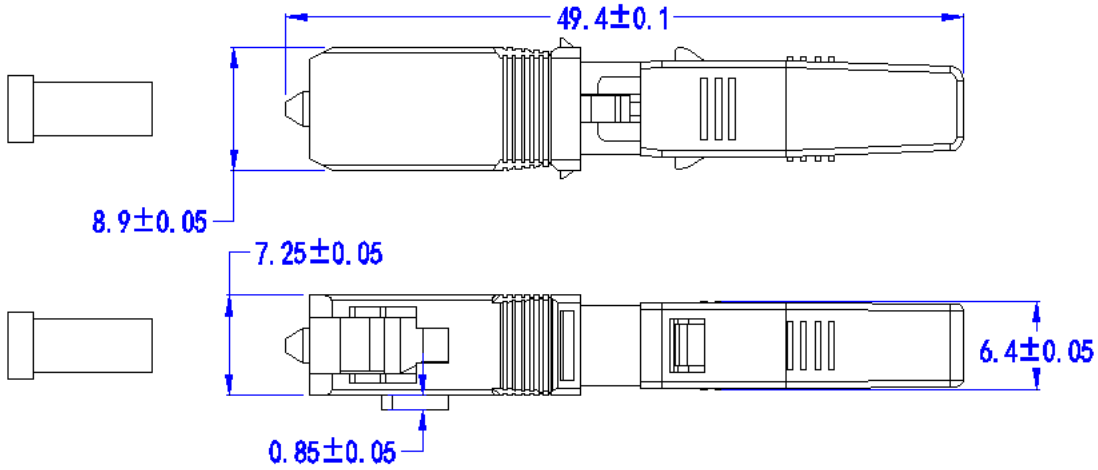
Chongqing Lixun Communication Device Co., Ltd.
http://www.lxftth.com

1. Description

This specification defines the characteristics of SC/UPC, SC/APC Field Installable Connector (FIC Type 49-1) with G657A/G652D fiber in a pre-polished SC/UPC ferrule. This FIC is produced by Chongqing Lixun Communication Device Co., Ltd. which is designed to be used with drop cable of 3.0mmx2.0mm dimension and 3.0mm patch cable.

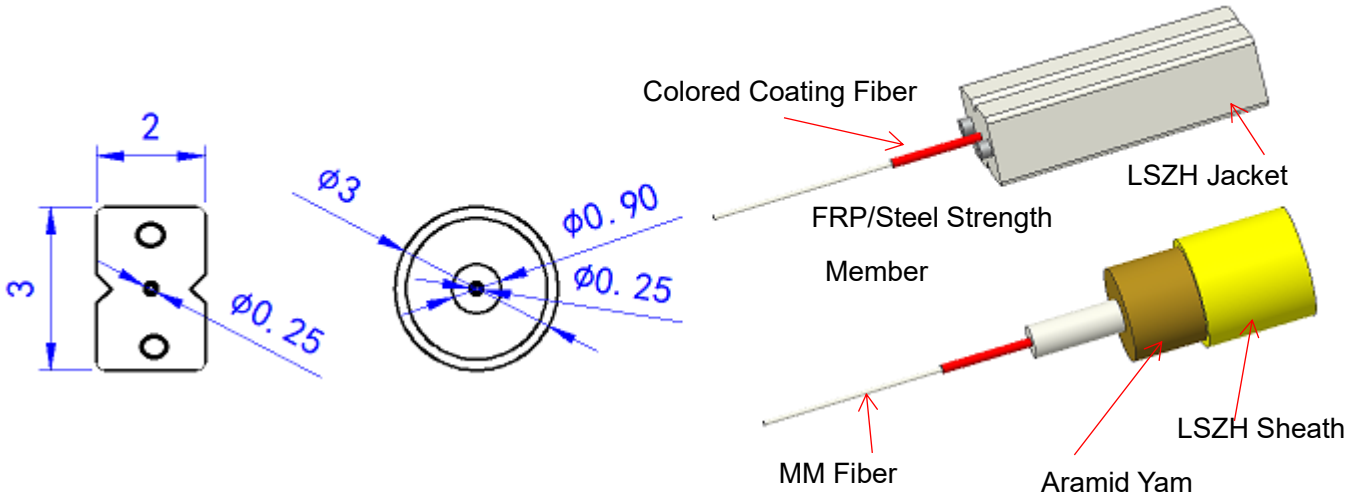
2. Outline Drawing of FIC

The outline of the FIC is as follows:



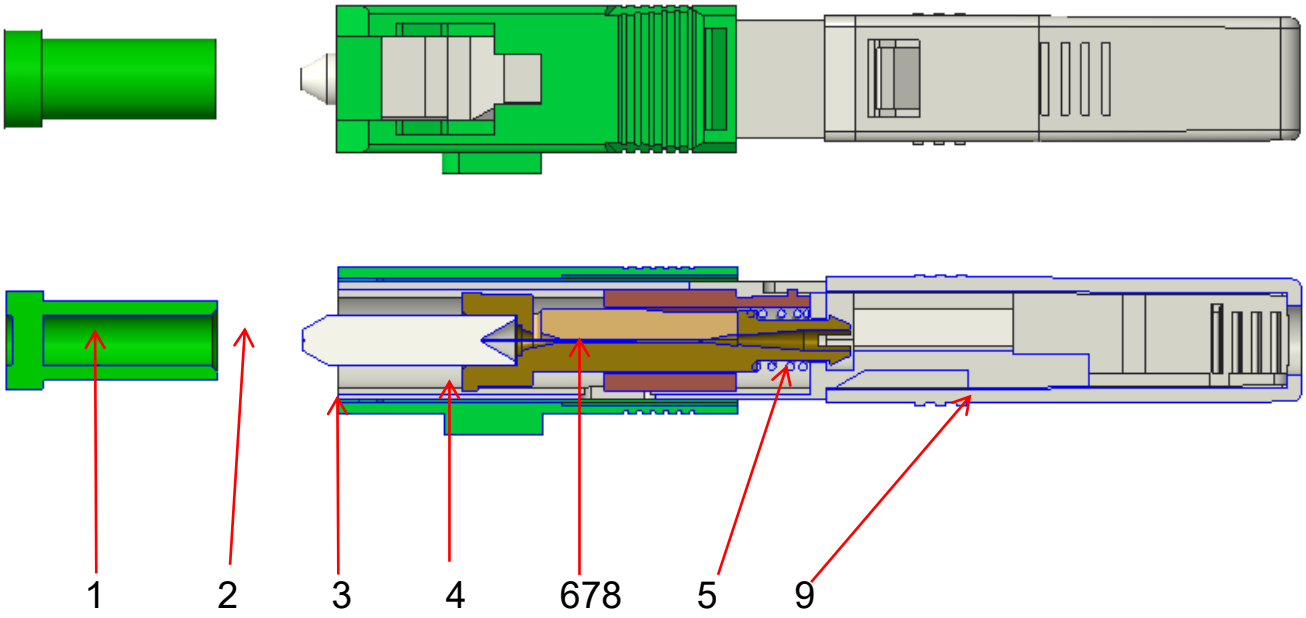
3. Outline Drawing of Cables

The outline of the fitted butterfly flat drop cable and 3.0mm simplex cable are as follows:



4. Construction:

The FIC comprises several parts as shown in the following drawing

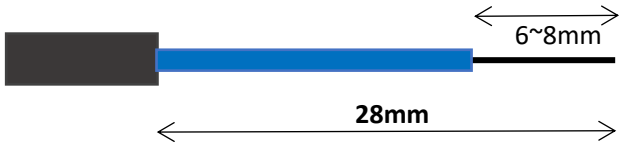


Part No.	Part Name
1	PE, Dust Cap, UPC: Transparent, APC: Green
2	Zirconia ceramics, Pre-polished Ferrule
3	PBT, SC Housing, UPC: Blue, APC: Green
4	PC+PBT, Long Shell, White
5	SUS304, Spring
6 7 8	PEI/SUS304, V Groove/Cover/Long lock
9	PBT, Back cap, White

It is acceptable for customer to label their company logo or name, etc., by laser marking on the surface of FIC. It is also negotiable to change the color of FIC per customer's request. The standard color of main body of FIC is Black.

5. Fiber length

The length guide is a specially designed tool to help user to strip the fiber coating to the preset length。 It has a ruler on itself to help user to strip to preset length effectively.



Total fiber length is 28mm, 0.125mm Bare Fiber: 6~9mm is OK.

6. Overall Performance

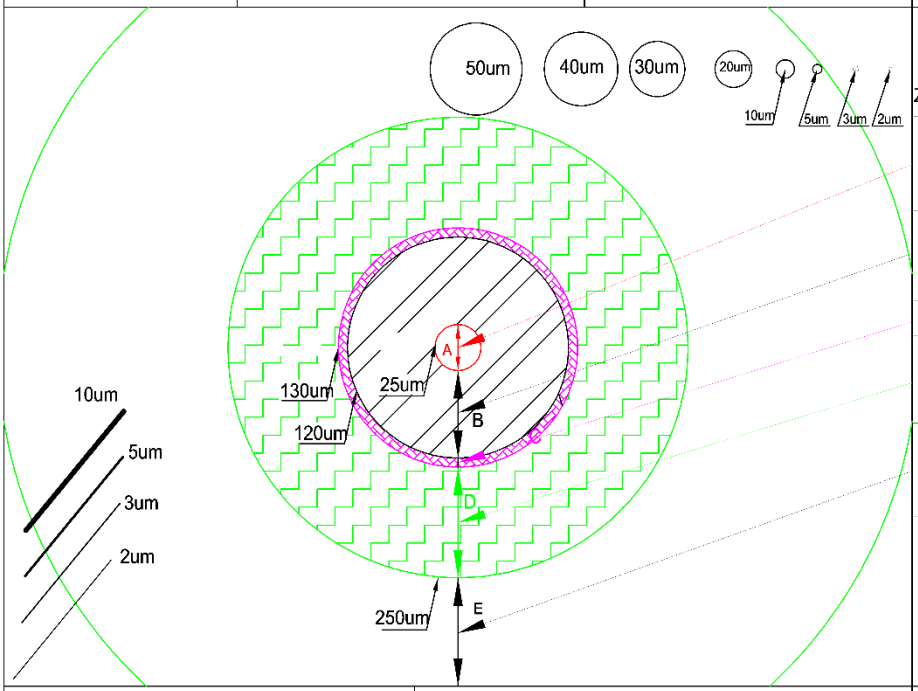
The FIC fulfills the following spec. and insertion loss is tested 100%. The return loss is produced to be as low as UPC-40~-45dB and APC-50~55dB, so the FIC could bring lowest disturbance to the FTTx system.

No.	Item Name	Description
1	Insertion Loss (dB)	Max.≤0.5dB, Typical≤0.3dB
2	Return Loss (dB)	Max.APC≤-50dB, Typical≤-55dB Max UPC≤-40dB, Typical≤-45dB
3	Ferrule End Face	A Zone no scratches at 400X
4	3D Interferometry	Complies to IEC 2009
5	Average Assembling Time	≤ 3 min
6	First-Time Done Yield Rate	≥ 95%
7	Re-Operation Times	Max. 5 times
8	Repeatability (±0.2dB)	≥ 90%
9	Appearance	No Defects
10	Tensile Strength	>25N

6.1 Polished connector surface

Class A Endface Test (200x)	File No.	WI-P3-02
	Page	Page 1 (Total 1 Page)

Client	Applicable Range	Product Type	Procedure
All	SC/LC Endface	UPC/APC	Connector Endface Test



Detailed requirement (can be customized)

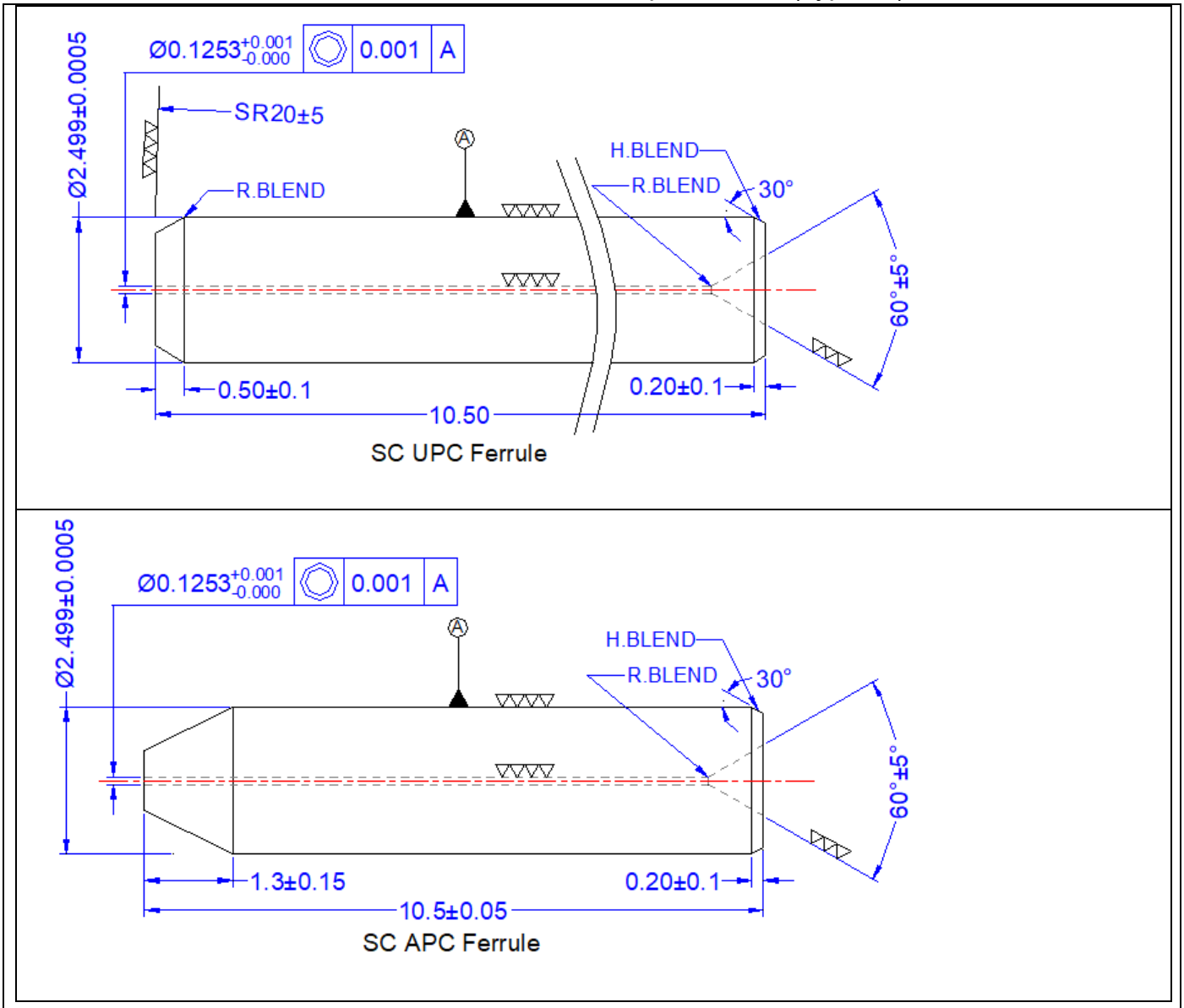
Zone	Acceptable characteristic: Type	Size	Quantity	Unacceptable characteristic
A	Any defects such as visible dirty, fragment concave, scratch are not allowable			
B	Scratch	<2um width	2pcs	Fracture
	Other unerasable defects	<5um width	3pcs	
C	Glue circle	No requirement, Not control		
D	Scratch	<5um width	1pcs	Long Fracture
	Other unerasable defects	<10um	few pcs	
E	Scratch	---	---	Long Fracture
	Other unerasable defects:	≤30um	---	
		30-50um	5pcs	

Remarks:
1. Special requirements: Can be customized
2. Environment production requirements: No hazardous wastes is generated during production.
3. Safety requirements: Work protection is required during production process, etc.
4. Related files: Work instructions on Endface Test.

By Liu Jian	Inspect: Liu Hongyu	Approval: Huang Xiaoyu
Date: 2020-10-11	Date: 2020-10-11	Date: 2020-10-11

7. Material – Zirconia APC Ferrule

The conical type, Zirconia MM ferrule used in FIC shall meet the following dimensions or with better performance than the drawing here.



8. Material – FIC Housing, Shells, and Dust Cap, all plastics

The FIC shall adopt engineered resin that meet the demand of RoHS and could withstand the temperature changes of the spec. Values.

9. Material – Matching Gel

The matching gel in FIC is well enough for 5-time re-operation in the field. The gel should also meet the RoHS requirement and providing superior optical performance

10. Working Conditions

The FIC could be operated normally during the following environmental conditions:

Item Name	Spec. Value
Operating Temperature	-20ºC~+75ºC
Storage Temperature	-40ºC~+85ºC

11.Packing

The FIC shall be packed according to the followings

1) 10pcs in a small blister box, and 8 blisters in a inner box (80pcs), and packed with one tool guide.

	Blister Size （cm)	14.6x7.4x1.5
	Q'ty (pcs/blister)	10
	N.W.(g/pcs)	2.33
	Inner box size (cm)	
	Inner box Q'ty (pcs)	

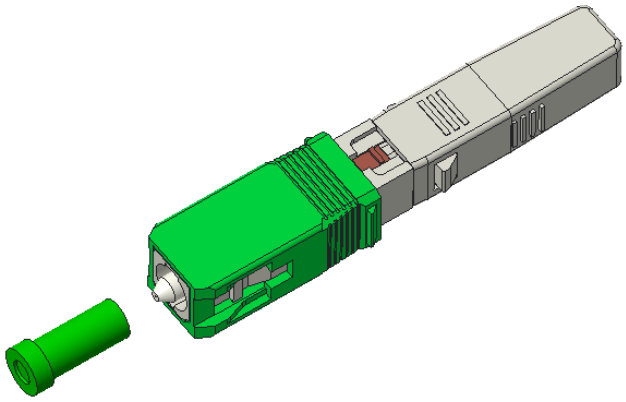
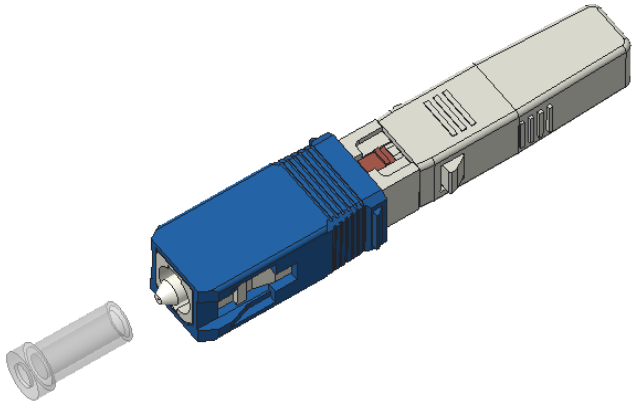
2) 800pcs in a big carton, total packed in 10 tool guides.

 	Size(cm)	
	Q'ty(inner boxes/carton)	
	Q'ty (pcs/carton)	
	N.W.(kg/carton)	
	G.W. (kg/carton)	

12. Warranty

If defective products are found and could be proved to be the responsibility of QingYing, then all the defectives will be replaced free of charge within 1 months.

13. UPC/APC appearance

 APC: dust cap & SC housing, Green	 UPC: dust cap transparent, SC housing Blue

14.Product Drawing：

QSC49Z1-UPC/APC

SC Field Installable Connector Specification (Type 49)