

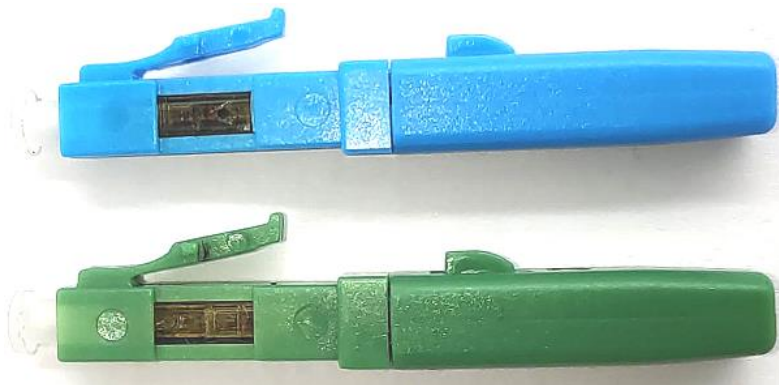


# Specification for

## QLC45Z2-APC QLC45Z2-UPC

### LC Field Installable Connector

For 2.0x3.0mm Drop Cable (FIC Type LC45)



Draft	Audit	Approve
Liu Jian	Lu Hongyu	Huang Xiaoyu

#### Revision List

Revise Date	Author	Document Rev.	Modification Record
2019-05-10	Liu Jian	V1.0	First writing
2021-2-12	Liu Hongyu	V2.0	Add more detailed description & modify format
2022-08-11	Liu Hongyu	V2.0A	Update LOGO

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



# QLC45Z2-APC Q45Z2-UPC

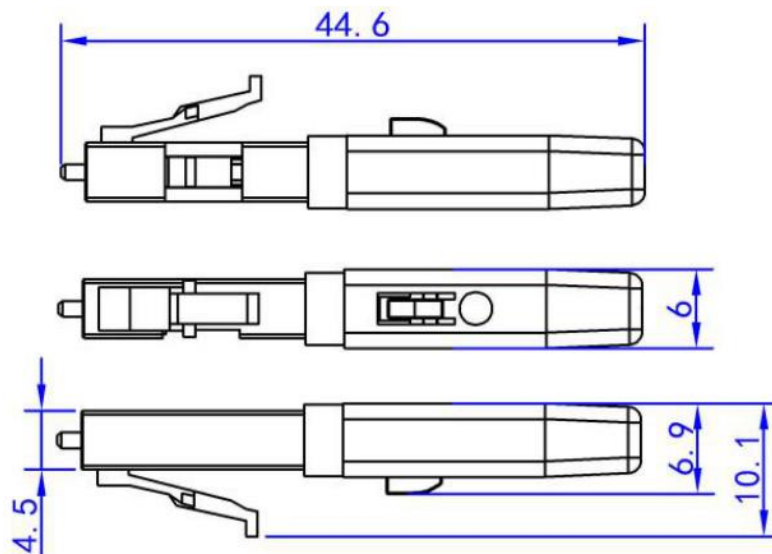
## Field Installable Connector Specification (Type 45)

### 1. Description

This specification defines the characteristics of LC UPC/APC Field Installable Connector (FIC Type LC45) with G652D/G657A1/G657A2 fiber in a pre-polished LC 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.

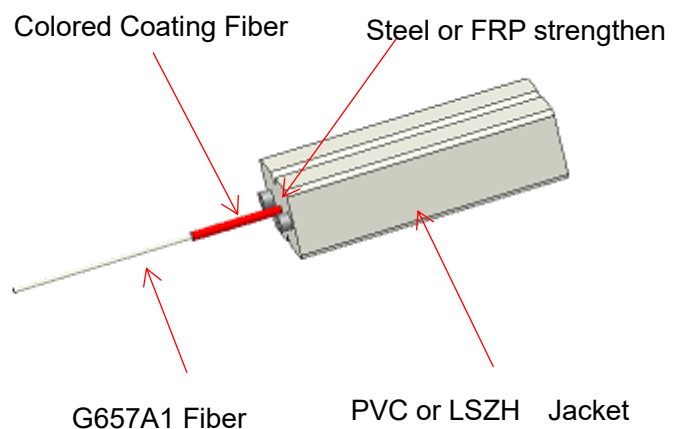
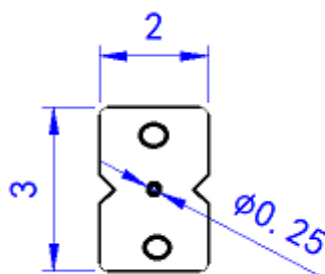
### 2. Outline Drawing of FIC

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:



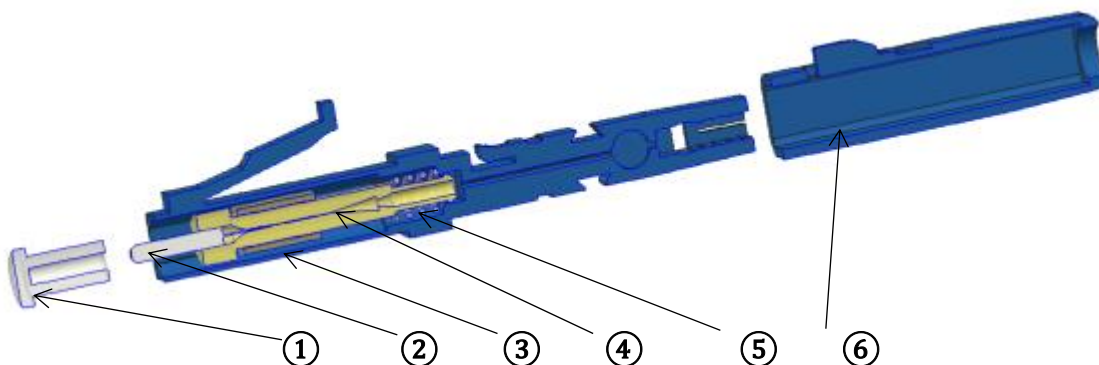
### 4. Construction:



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The FIC comprises several parts as shown in the following drawing



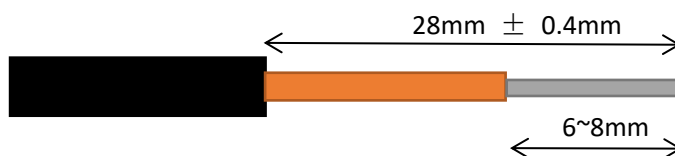
Bill of materials		
Part No.	Part name	Description
①	Dust cap	PE, UPC: Transparent; APC: Green
②	LC polished ferrule	Zirconia ceramics embedding with G657A1/G657A2/G62D/MM fiber as ordered
③	LC Main body	UPC: Blue, APC: Green
④	V-groove set	PEI, with V-groove, Cover, Lock ring
⑤	Spring	SUS304
⑥	Tail cap	PEI/PC, UPC: Blue, APC: Green

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 Green/Blue.

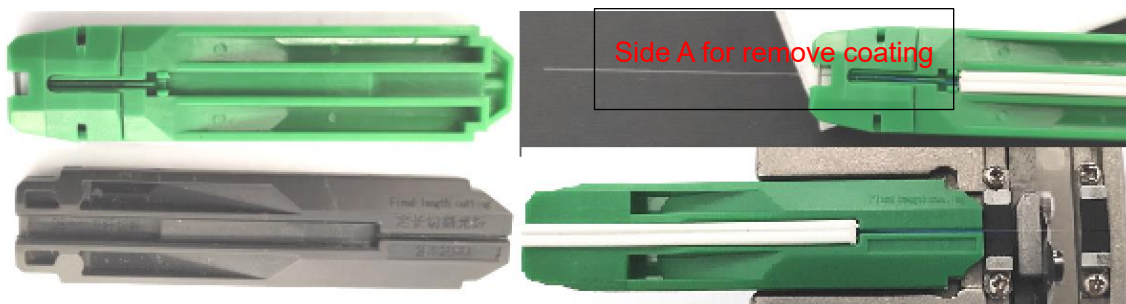
### 5. Fiber length

The length guide is a specially designed tool to help user to strip the fiber coating to the preset length: 0.250mm Primary Coating: 20~22mm, 0.125mm Bare Fiber: 6~8mm

**Total fiber length: 28mm  $\pm$  0.4mm**



User could strip off the sheath of drop cable to 40mm, then put the fiber on the guide tool **SIDE A** (shown below), Striping from the bottom of top end of cable clamp to remove coating, then take cable out, put into the guide tool **SIDE B**, put them on the cleaver (shown below) and cut the fiber.



### 6. Overall Performance



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The FIC fulfills the following spec. and insertion loss is tested 100%. The return loss is produced to be almost as low as patch cord, 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	>30N

### 6.1 Polished ferrule standard

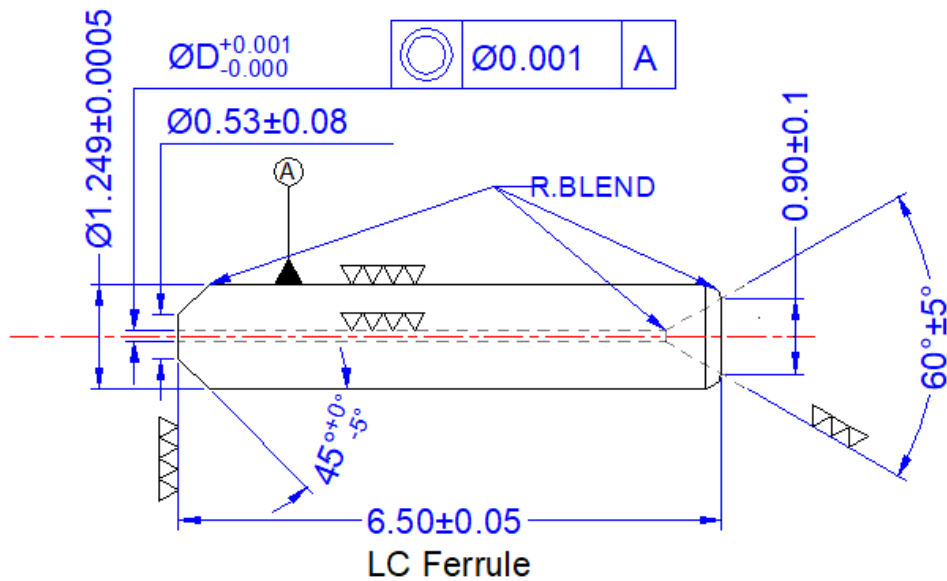
Class A Endface Test (200x)			File No.	WI-P3-02
			Page	Page 1 (Total 1 Page)
Client	Applicable Range	Product Type	Procedure	
All	SC/LC Endface	UPC/APC	Connector Endface Test	
			Zone	Detailed requirement (can be customized)
			Acceptable characteristic	
			Type	Size Quantity
			A	Any defects such as 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 --- --- Other unerasable defects: ≤30um --- Long Fracture 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 APC ferrule used in FIC shall meet the dimension and performance of GR-326.



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### 8. Material – FIC Housing & Dust Cap

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	-20°C~+75°C
Storage Temperature	-40°C~+85°C

### 11. Packing

The FIC shall be packed according to the followings:

- 1) 10pcs in a small blister box

	Size (cm)	18x11.8x1.5
	Q'ty (pcs/box)	10
	N.W. (g/pcs)	3.23
	N.W. (g/box)	16.08
	G.W. (g/box)	50.8

- 2) 1,000pcs in a big carton



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Size(cm)	45x25x24
Q'ty (10 blister box)	100
Q'ty (pcs/carton)	1000
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.

----- End of SPEC -----