

# Duplex Fiber Optic Patch Cord Single Mode - LC to LC



## TECHNICAL SPECIFICATIONS

### Fiber

- SM fiber according with international standards: G652x, G657xx, G656x, G655x.

### Cable

According with customer request, OFP and International standards.

- **Colour:** OFP standard yellow.
- **Diameter (mm):** 1,6, 1,8, 2,0, 2,4, 2,8
- **Sheathed:** LSZH, FRNC, RoSH
- **Standards:**
  - NF C 32-070 C1,
  - EN 187000, 50265, 50268
  - IEC 61034, 60794, 61300, 60331, 60332

### Connector

- **Lc:** EN 61754-20, TIA 604-10-A. Zirconium ferrule, 125 to 126um. Plastic push pull body. Matting cycles: >1000.
- **Boot:** White/Blue (Other colour upon request)
- **T°C range:** -20°C to +70°C

## STANDARD ASSEMBLING

- In compliance with international standard and customer request.
- Manufactured according with:
  - IEC 61300-2-41, 61300-3-4, 60874-14, 60793-2-10
  - EN 186270, 50173-1, 61754-4
  - Telcordia GR-326-CORE
  - TIA/EIA- 68-b.3
  - FOTP 34, 171

## STANDARD LENGTH (m)

- 0,3, 0,5, 1,0, 2,0, 3,0, 5,0, 10, 15, 20. Other length according with customer request.

## STANDARD PACKAGING

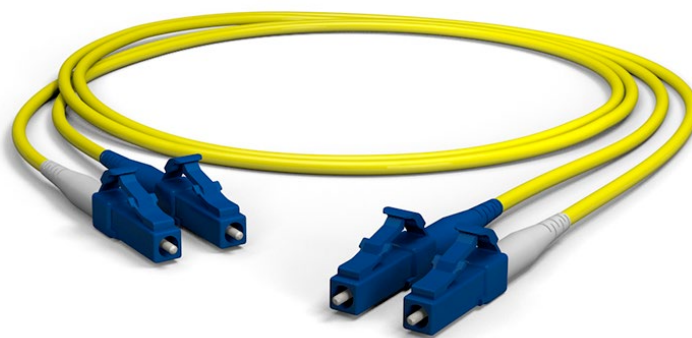
- Plastic PE bag, Blister, Carton box 2 (or 1) pieces per bag.
- Label: Standard OFP labeling and according with customer request.

## ASSEMBLY CLASSES

- To meet different customer requirements, OFP produce different "class" assembly. This 3 classes, Standard, Excellence, 5 Stars Premium differ in the SM and MM application by the different assured values of Insertion Loss (I.L.) and Return Loss( R.L.).
- The insertion loss (I.L.) value is granted in such a way that assemblies will not exceed the value mentioned in the tables below, whereas the return loss in no case will be less than the indicated value in the table.
- For SM applications for any assembly the I.L. and R.L. is measured individually and the measured actual values are indicated either on the packing (option) or on a separate test protocol (option). For MM assemblies with the assembly class "Standard" it is secured that the I.L. and R.L. values are within the indicated values, but are not indicated individually.
- For MM assemblies with the assembly class "Premium Excellence" it will be also secured that each measured value will be indicated individually on the packing.

## WE ALSO PRODUCE "ECO CLASS" PRODUCTS AT CHEAPER PRICES:

PC	APC
-40dB	-60dB
< 0,5dB	< 0,5dB



## SPECIFICATIONS FOR "STANDARD" CLASS: (FOR CERAMIC FERRULE CONNECTORS)

ITEM	SM		MM
	SPC	APC	-
Polishing type	SPC	APC	-
Insertion loss (standard) 95% will reach	≤ 0,3dB		≤ 0,3dB
Return loss (standard) 100% will reach	≤ -45dB	≤ -60dB	-
Durability (1000 Mating)	0,2dB máx. increase		

## SPECIFICATIONS FOR "EXCELLENCE PREMIUM" CLASS: (FOR CERAMIC FERRULE CONNECTORS)

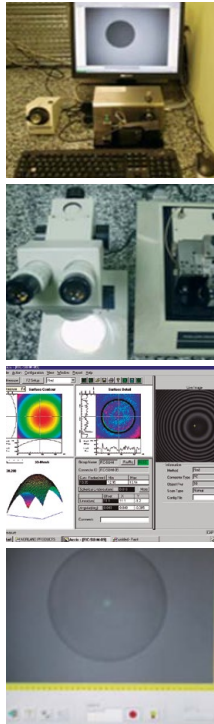
ITEM	SM		MM
	UPC	APC	-
Polishing type	UPC	APC	-
Insertion loss (standard) 95% will reach	≤ 0,15dB		≤ 0,3dB
Return loss (standard) 100% will reach	≤ -55dB	≤ -65dB	≤ -45dB
Durability (1000 Mating)	0,3dB máx. increase		

## SPECIFICATIONS FOR "STANDARD" CLASS: (FOR MT FERRULE CONNECTORS)

ITEM	SM		MM
Insertion loss (standard) 95% will reach	≤ 0,5dB		≤ 0,75dB
Return loss (standard) 100% will reach	≤ -40dB		-
Durability (1000 Mating)	0,3dB máx. increase		

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## QUALITY ASSEMBLING



### Test System

- OFP is leading strict testing procedure on every pigtailed and patch cord delivered.
- The aim of the testing procedure is to ensure that every connexion is perfect.
- 100% control.

### Insertion Loss

- For SM Fiber Optic cable:  
Tested in accordance with the Telcordia GR-326-CORE, and industry standard TIA/EIA-68-b.3, the maximum insertion loss shall not exceed 0,3dB against master connector. (\*)
- For MM Fiber Optic cable:  
In accordance with FOTP-34 (interconnection device insertion loss test) and FOTP-171 (attenuation by substitution measurement) all tests are measured with advanced testing equipment. The maximum insertion loss shall not exceed 0,3dB against master connector. (\*)

### Return Loss

- For Single mode fiber optic cable only.
- Strictly following FOTP-107, return loss measurement procedure.

### Ferrule Surface Inspection

- Every connector is inspected with 400x microscope to ensure no visible scratch on the fiber.
- We also propose 1200x inspection.

### Interferometry & Concentricity Measure for Ferrule

- Controlling connector end-face geometry and concentricity is key to assuring network reliability. Radius of curvature, fibre height, apex offset, fiber and ferrule roughness as well concentricity are the most critical parameters that affect long-term connector performance.
- These parameters are closely monitored and controlled throughout the production process, thus assuring the highest quality in every cable assembly.

## STANDARD FIBER QUALITY

Parameters	Pass/Fall Limits (Min.)		Pass/Fall Limits (Max.)	
	PC	APC	PC	APC
Radius of Curvature	7	5	25	15
Fiber Height (Spherical Fit)	-125	-70	+50	+10
Fiber Height (Planar Fit)	-10		+200	
Apex Offset	0	0	50	100
Actual Angle	-0,2		+0,2	
Key Error	0,15 (only APC)		0,15 (only APC)	
Fiber Roughness (Rq)	0		50	
Fiber Roughness (Ra)	0		50	
Ferrule Roughness (Rq)	0		50	
Ferrule Roughness (Ra)	0		50	
Diameter	125		130	

(\*) OFP could propose "5 stars Premium" patch cord with 0,1dB loss.