

FJ Series

# Compact Optical Fiber In-Line Connector for Internal Connection (FJ-L)



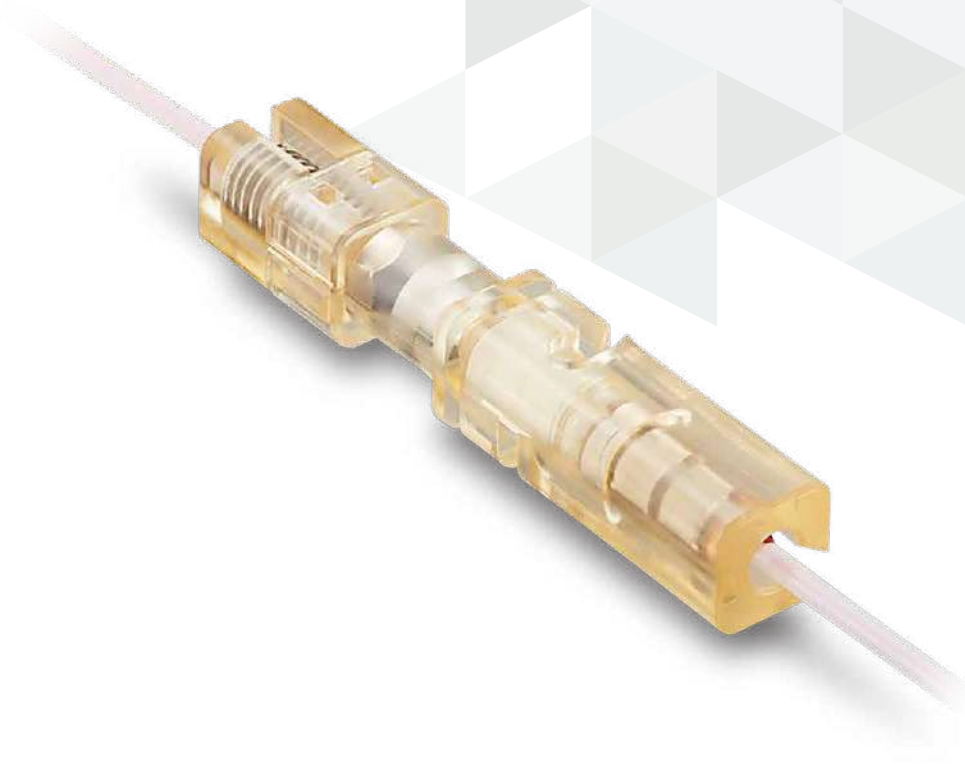
Fiber Optics



Slim In-Line



Bayonet



## Overview

The FJ-L offers a compact optical connection using standard LC parts, ensuring more stable connectivity compared to traditional fusion methods.

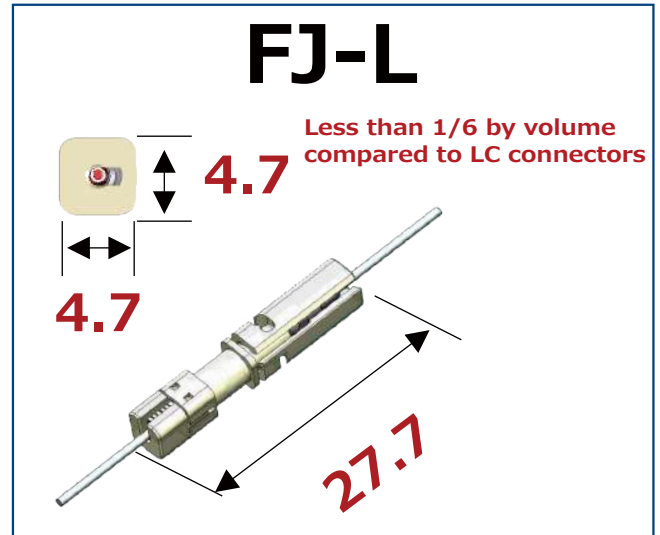
## Features

### 1. Space-Saving

Plug diameter:  $\phi 5.5\text{mm}$ .

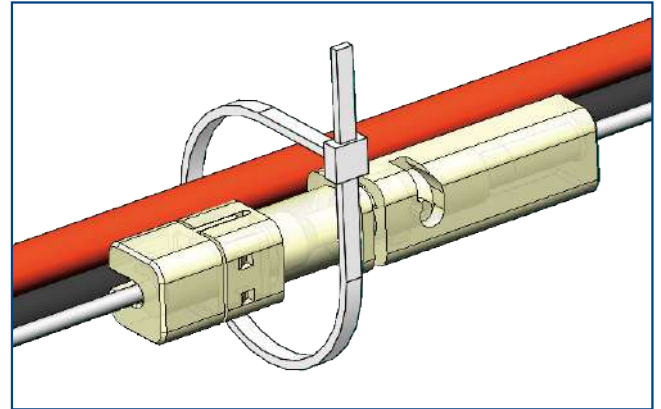
Jack diameter:  $\phi 3.5\text{mm}$ .

Accommodates ferrules within these dimensions.



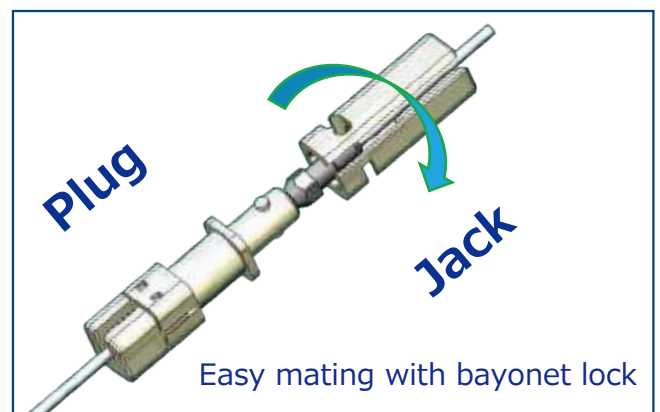
### 2. Can tie with wires.

The connector can be tied alongside the wire using a binding band.



### 3. Easy Mating with Bayonet Lock Design

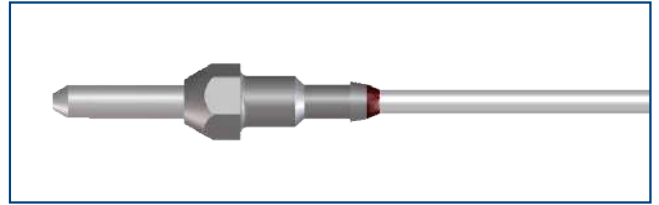
The bayonet lock design ensures easy and secure mating.



## 4. Standard LC Connector Ferrules

Utilizes standard LC connector ferrules, offering flexibility in choosing distributors and cable assembly manufacturers.

(Note: Only Multimode Fiber (MMF) is applicable.)

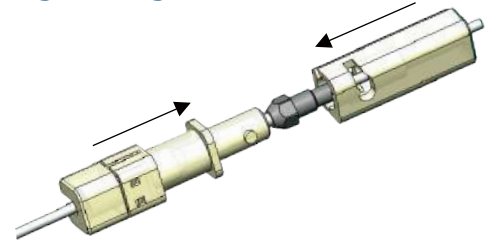


## 5. Easy Assembly

Assembly is straightforward and more stable than fusion splicing due to the utilization of standard optical connector cabling processes.

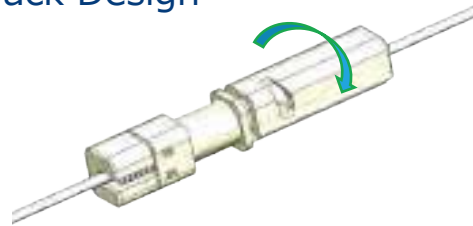
Additionally, manual assembly is simplified.

### Plug Design



Insert the ferrule into the plug tip, place the jack over it, and insert the plug projection into the jack hole.

### Jack Design



Rotate the jack right to lock, left to release.

## Product Specifications

Used Cable	φ 0.5 Bending Resistant Fiber (GI50/80)	Operating Temperature Range (Operating)	-10 to +85°C (85% RH Max.) Operating in conditions without freezing and moisture condensation.
Storage Temperature Range (When packing)	-10 to +60°C (5 to 85% RH) Operating in conditions without freezing and moisture condensation.	Storage Temperature Range (Non-operating after mounting)	-40 to +85°C (85% RH Max.) Operating in conditions without freezing and moisture condensation.
Compatible Connector	FJ-L Plug Cable Assembly		

Item	Specifications	Conditions
Insertion Loss (Note)	0.5dB Max. (Per terminal)	Use a 850nmLED stabilized light source. Measure the insertion loss at both ends (LC ferrule).
Mating Durability	No damage affecting function or operating performance (Check appearance and signal transmission) Post-test insertion loss variation: 0.5dB Max. No damage, cracks or part dislocation	50 times
Vibration Resistance		Frequency 10-55Hz, Half amplitude 0.75mm, 3 directions, 10cycle each.
Impact Resistance		Acceleration 490m/s <sup>2</sup> , Pulse duration 11ms, Half-Sin wave, 3directions, three times each
Temperature Cycle		Temperature -40°C ⇔ +85°C, Time 10min. ⇔ 10min. in 100cycles
Heat Resistance		Test conducted at temperature of +85°C for 1,000hours
Cold Resistance		Test conducted at temperature of -40°C for 1,000hours
Temperature and Humidity Cycle		Test conducted at a temperature -10 to +65°C, 24hours each for 10cycles

(Note) Insertion loss measurement uses the master cable assembly.

## Handling Precautions

Clean the end face of the ferrule after each mating.  
(Use a pen-type cleaner on the plug side.)

## Materials / Finish

Component	Material
Optical Fiber	Fiber: Silica Glass Coating: UV Curable Resin/Fluorinated Resin
Hytrek Tubing	Tubing: Polyester Thermoplastic Elastomer
FJ-L Plug	LC Ferrule: Zirconia/Brass Spring: Stainless Steel Split Sleeve: Zirconia LC Coupling P1: Polyether Sulfone LC Coupling P2: Polyether Sulfone
Plug Cap	Cap: Styrenic Elastomer
FJ-L Jack	LC Coupling J: Polyether Sulfone
LC Ferrule Cap 1.25	Cap: Polyester Thermoplastic Elastomer

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

### Cable Assembly

#### FJ L N - LN - M08 01 - 1M

① ② ③ ④ ⑤ ⑥ ⑦

① Series Name	FJ Series	⑤ Cable Specification	M08: Outer Dia. $\phi$ 0.5, Red
② Ferrule Type	L: LC Ferrule	⑥ Serial Number	Different Series
③ Connector Type	FJ-L P: Plug (Assembled) N: Ferrule only	⑦ Length	##M: 1m Min. ##MM: 1m or less.
④ Reverse End Connector	SC FC FCAPC LC LP: FJ-L Plug LN: FJ-L Ferrule only UP: FJ-U Ferrule+Spring UN: FJ-U Ferrule only BL: Detach		

(Note) We also have a combination cable assembly with our BF4 series.  
For more information, please contact Hirose representative.

### Plug Kit

#### FJ - L - P - KT 1

① ② ③ ④ ⑤

① Series Name	FJ Series	④ Packaging Style	Kit
② Ferrule Type	L: LC Ferrule	⑤ Serial Number	Different Series
③ Connector Type	P: Plug		

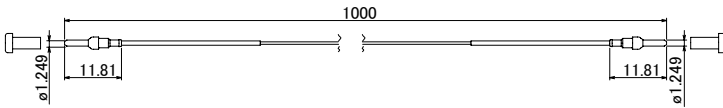
### Jack

#### FJ - L - J - 1

① ② ③ ④

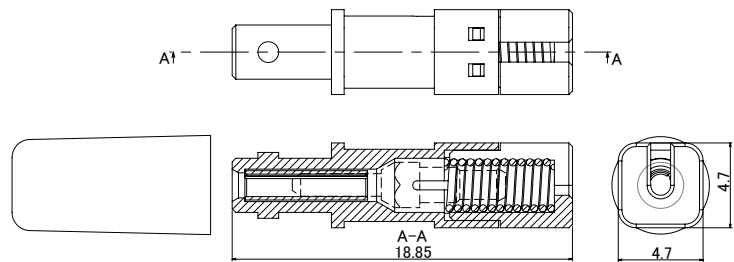
① Series Name	FJ Series	③ Connector Type	J: Jack
② Ferrule Type	L: LC Ferrule	④ Serial Number	Different Series

## Cable Assembly



Part No.	HRS No.	Purchase Unit
FJLN-LN-M0801-1M	CL0719-1500-0-00	1pc per bag

## Plug Kit

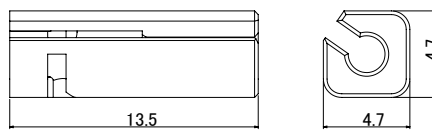


Part No.	HRS No.	Purchase Unit
FJ-L-P-KT1	CL0719-1100-0-00	200 sets per bag

Note 1: Ferrules are not included.

Note 2: The actual kit has not been assembled.

## Jack



Part No.	HRS No.	Purchase Unit
FJ-L-J-1	CL0719-1101-0-00	100pcs per bag

## Precautions

### Precautions for Handling Products

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## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.