

FJ Series

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



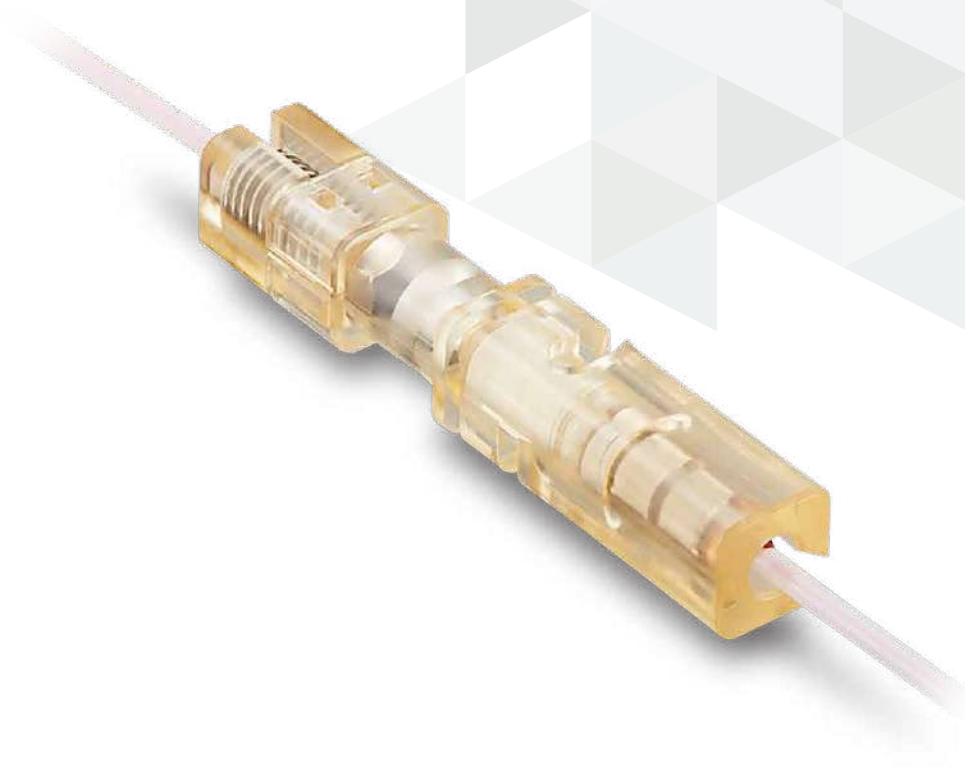
Fiber Optics



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.

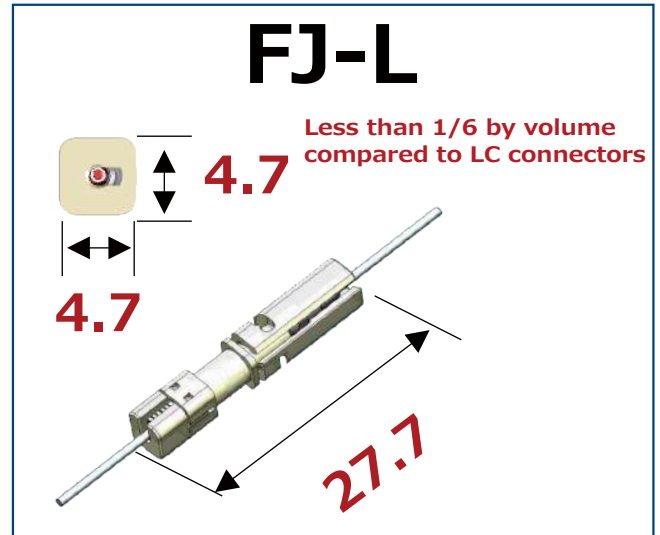
Features

1. Space-Saving

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

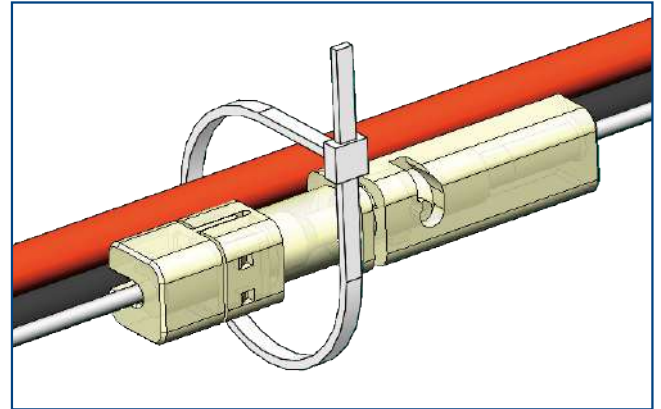
Jack diameter: $\phi 3.5\text{mm}$.

Accommodates ferrules within these dimensions.



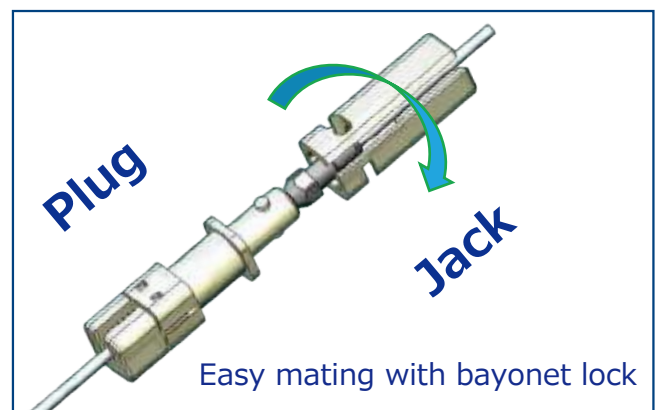
2. Can tie with wires.

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



3. Easy Mating with Bayonet Lock Design

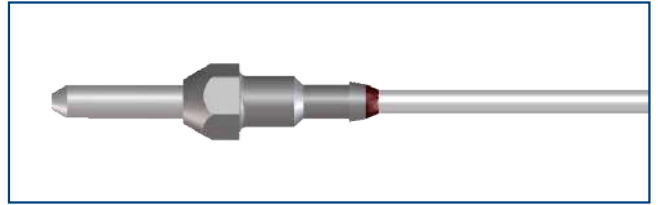
The bayonet lock design ensures easy and secure mating.



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.)

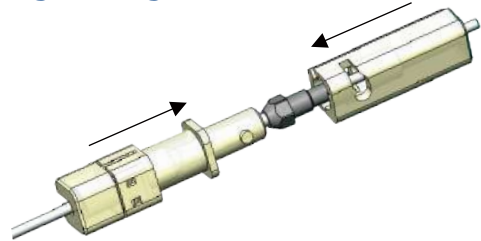


5. Easy Assembly

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

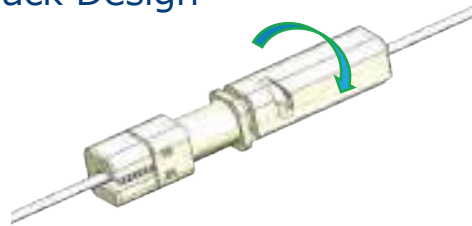
Additionally, manual assembly is simplified.

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 ² , 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. ϕ 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 | | |

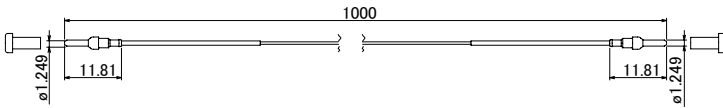
Jack

FJ - L - J - 1

① ② ③ ④

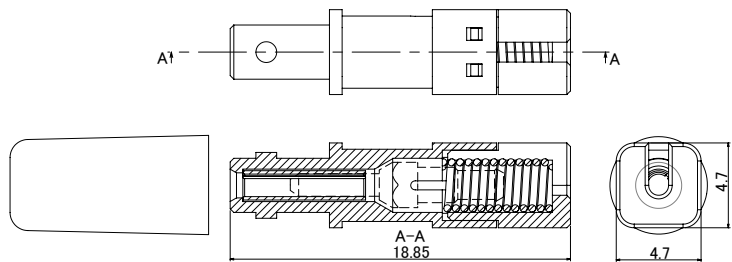
| | | | |
|----------------|---------------|------------------|------------------|
| ① Series Name | FJ Series | ③ Connector Type | J: Jack |
| ② Ferrule Type | L: LC Ferrule | ④ Serial Number | Different Series |

Cable Assembly



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

Plug Kit

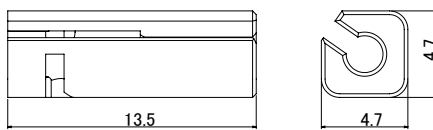


| Part No. | HRS No. | Purchase Unit |
|------------|------------------|------------------|
| FJ-L-P-KT1 | CL0719-1100-0-00 | 200 sets per bag |

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

(Changes in Content)

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- When exporting this product outside Japan, the exporter is required to make the determination in accordance with the Foreign Exchange and Foreign Trade Law. If you would like the determination issued by our company, please contact your sales representative. In the export arrangement, you are the exporter and responsible for complying with the relevant laws, regulations and our company terms and conditions.

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.