

Environmentally Resistant Outdoor Optical Connector  
Incorporating an Optical Module in the Plug Connector

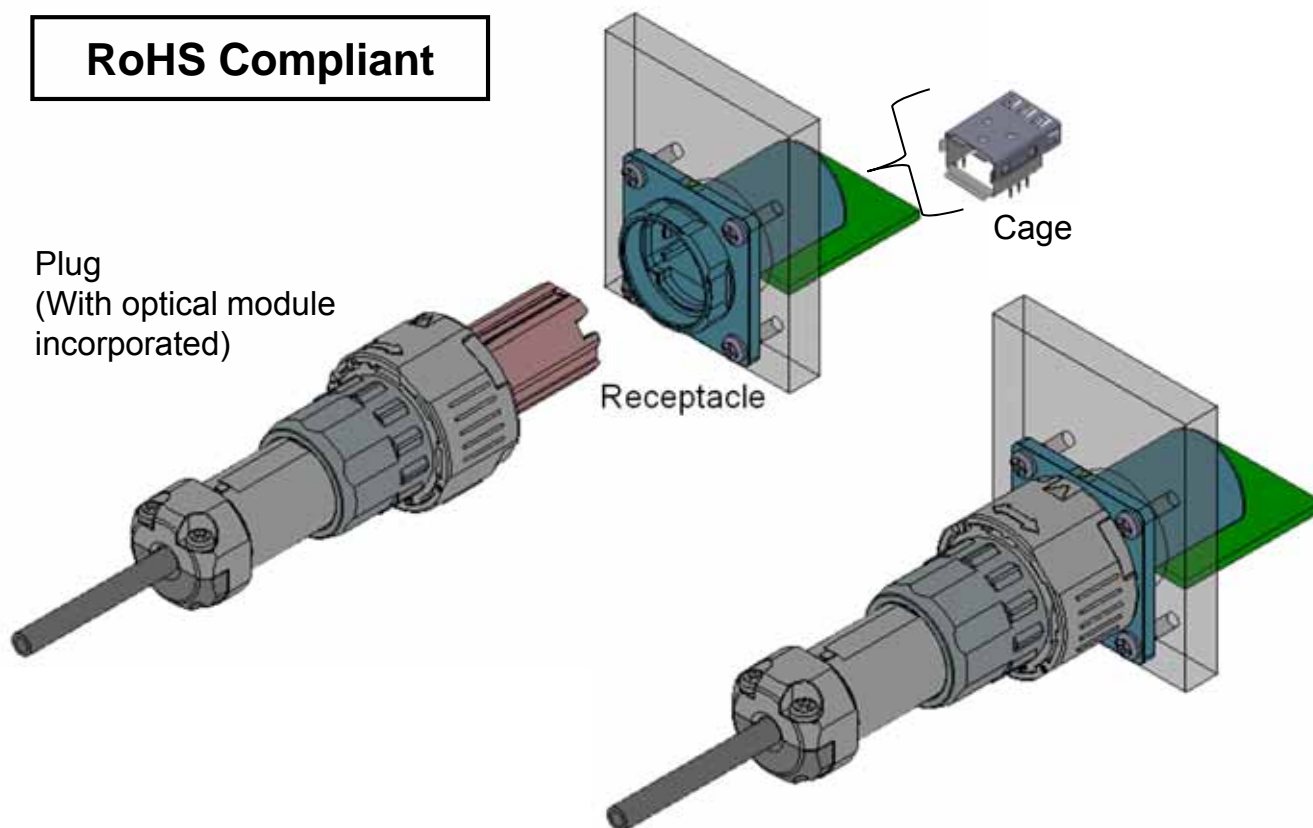
CONNECTOR

MB-0363-1

January 2021

# FO-BD7 Series

**RoHS Compliant**



Base stations for mobile devices are an important communication infrastructure. Along with the high-performing, high-speed, large-volume network transmission, thermal management has become a major focus of attention of modern, miniaturized base stations. These base station, communicating with core networks, have designed in optical modules which can easily be affected by heat and tends to be a common problem during the design process of the base stations. It is common for optical modules requiring replacement once the base station is installed, and as this being a complex process the expectation relies on connectors to be easily replaced.

To cater to these demands JAE has launched an environmentally resistant optical module incorporated plug connector, FO-BD7 Series, for outdoor use.

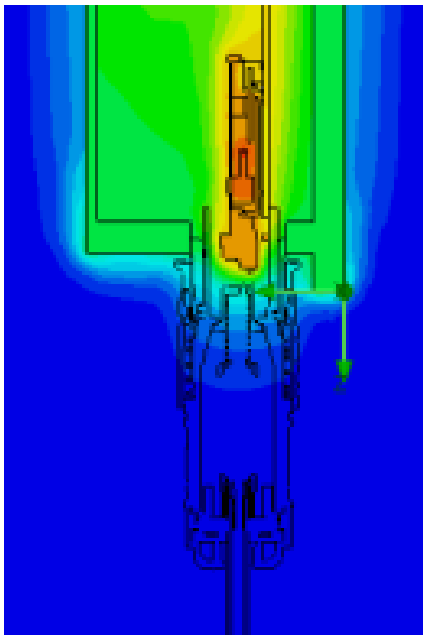
## Features

- Thermal countermeasure by installing an optical module within the plug connector
- Seamless optical module replacement process
- IP67 rated water / dust ingress protection
- Environmental resistance ideal for outdoor applications

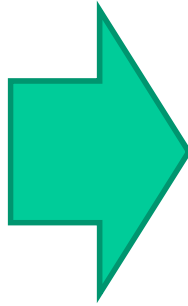
## Applicable Market

Mobile base stations, Outdoor installed equipment, Security cameras, etc.

## Thermal Characteristics



Conventional products



FO-BD7

Thermal simulation

## Replacement Operation



Images of optical module replacement process

## General Specifications

| Items                     | Specification and Performance                         |
|---------------------------|-------------------------------------------------------|
| Operating Temperature     | -20 ~ +65 deg C (Individual connector)                |
| Applicable Cable Diameter | Φ5mm                                                  |
| Durability                | Mating area: 50 times<br>LC Connector area: 100 times |
| Cable Clamp Strength      | 100N min.                                             |
| Ingress Protection        | IP67 (in mated condition)                             |
| Corrosion Resistance      | 1,000 hours of salt spray                             |

## Materials and Finishes

### Receptacle

| Component | Material and Finishes                   |
|-----------|-----------------------------------------|
| Shell     | Zinc alloy / Cr plating over Ni over Cu |
| O Ring    | Synthetic rubber                        |

### Cage

| Component | Material and Finishes                          |
|-----------|------------------------------------------------|
| Cage      | Copper alloy / Ni plating (partial Au plating) |

### Plug

| Component  | Material and Finishes                   |
|------------|-----------------------------------------|
| Barrel     | Zinc alloy / Cr plating over Ni over Cu |
| Ground Nut | Weather resistant resin                 |
| Bushing    | Synthetic rubber                        |
| O Ring     | Synthetic rubber                        |

### Waterproof cap for receptacle

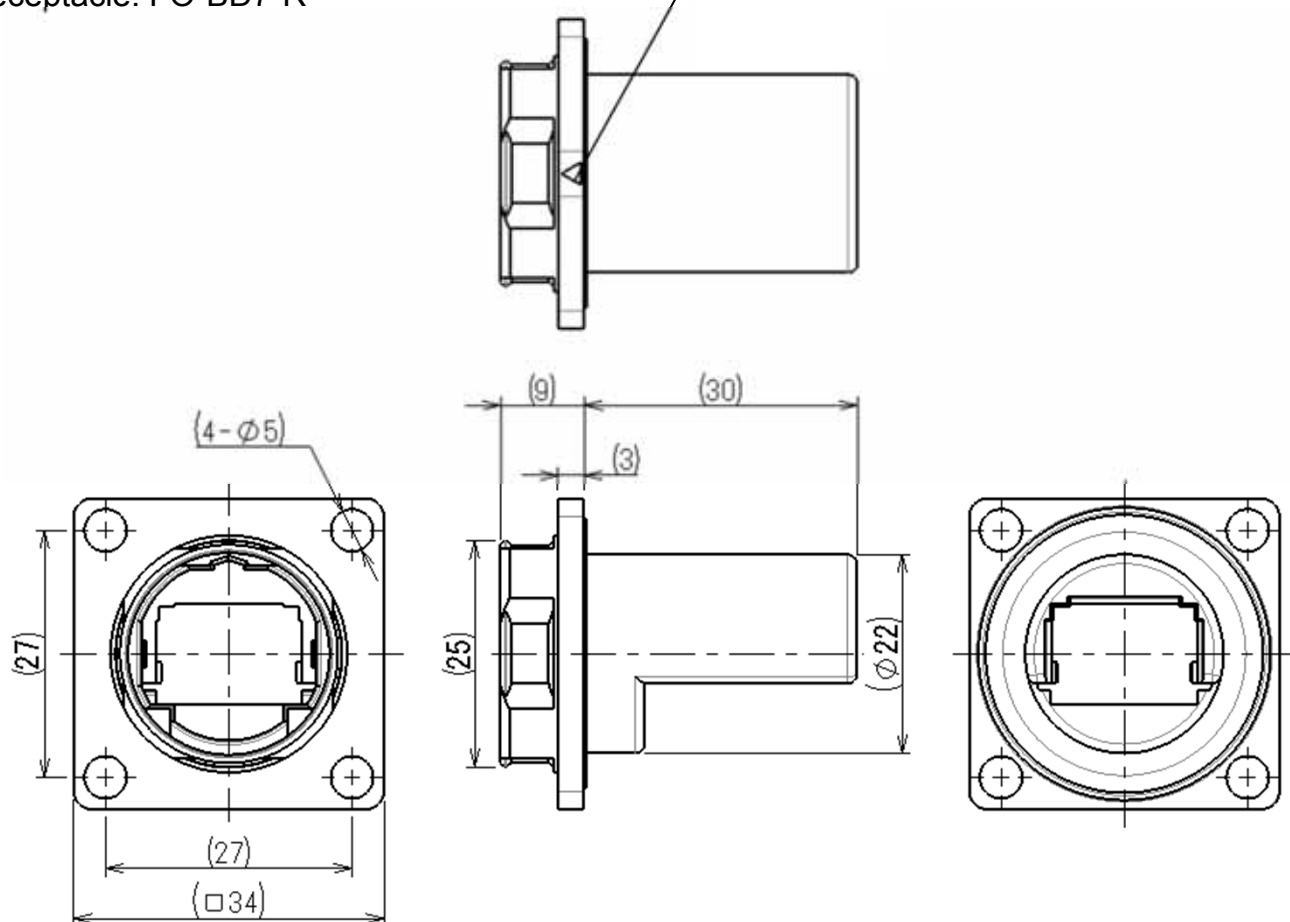
| Component | Materials and Finishes  |
|-----------|-------------------------|
| Cap       | Weather resistant resin |

| Type                          | Part Number | Drawing Number | Specifications                                                                        | Handling Instructions |
|-------------------------------|-------------|----------------|---------------------------------------------------------------------------------------|-----------------------|
| Receptacle                    | FO-BD7-R    | SJ121366       | Plug connector is available as harnessed product only. Please contact us for details. |                       |
| Cage                          | FO-BD7-C    | SJ121299       |                                                                                       |                       |
| Plug                          | -           | -              |                                                                                       |                       |
| Waterproof cap for receptacle | FO-BD7-R-DC | SJ121367       |                                                                                       |                       |

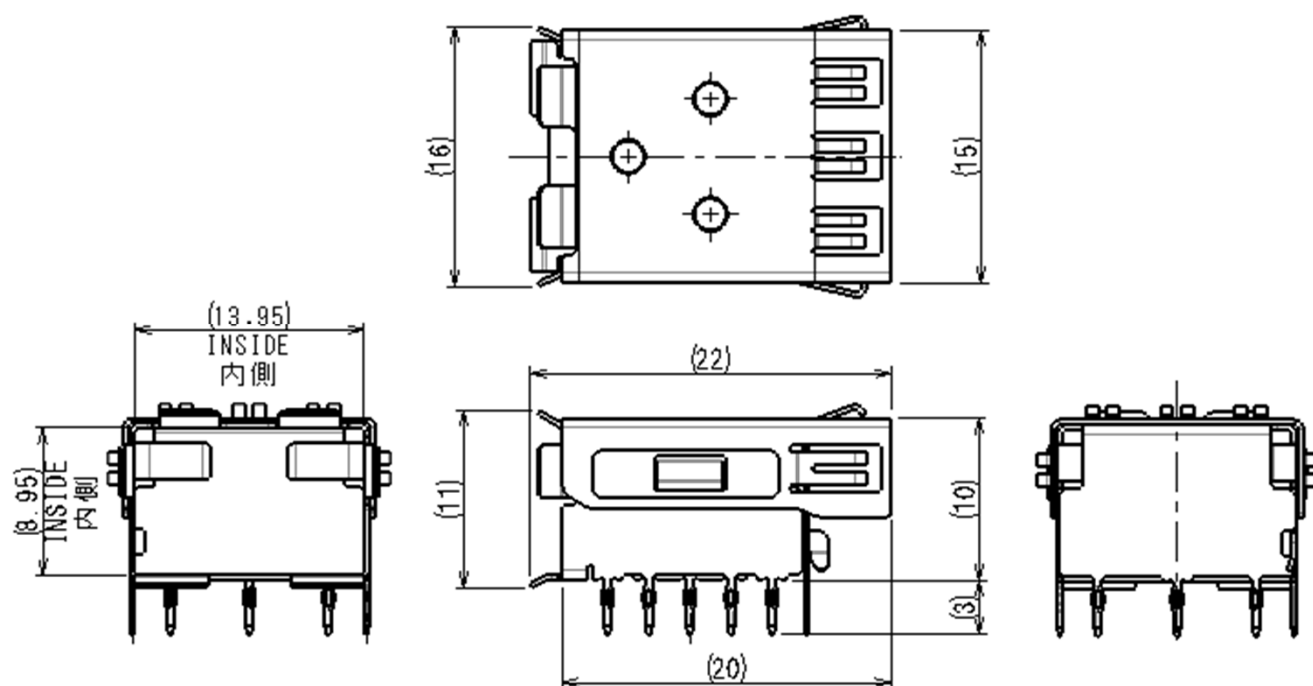
## Outer Dimensions

Receptacle: FO-BD7-R

Keying Orientation

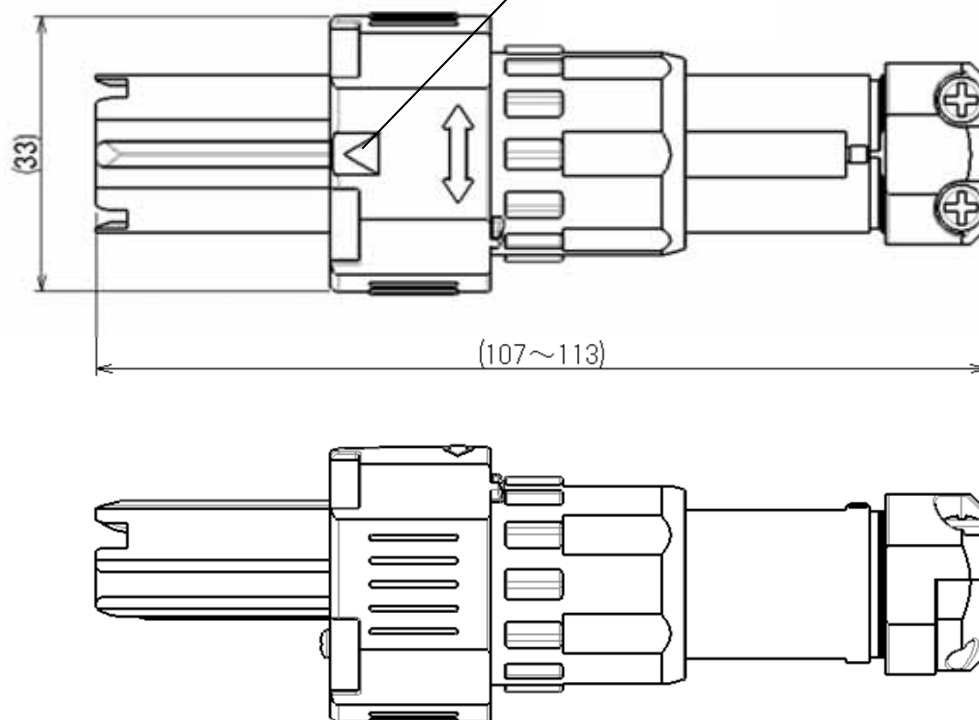


Cage: FO-BD7-C



Plug: Drawing for reference

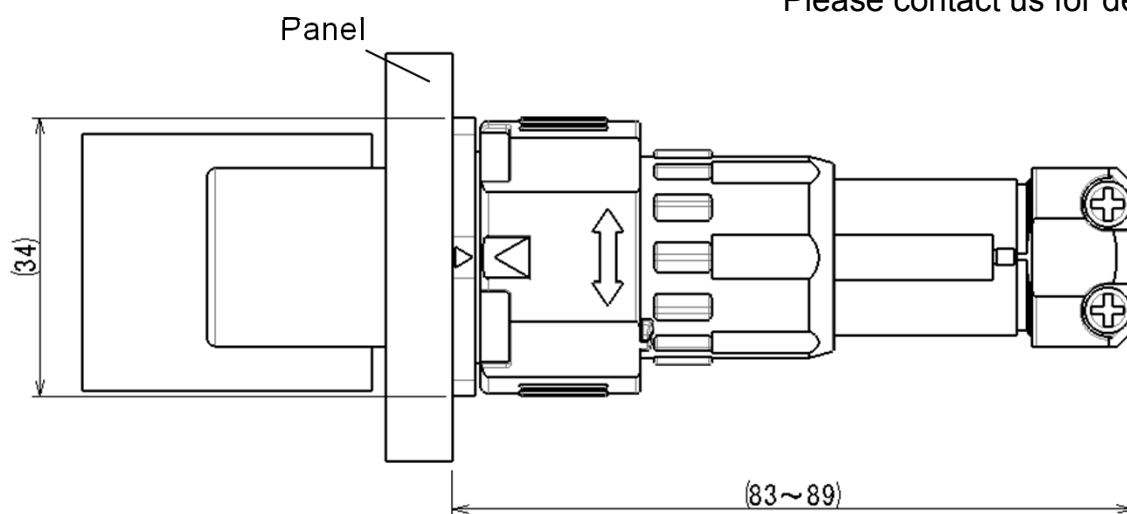
Keying Orientation



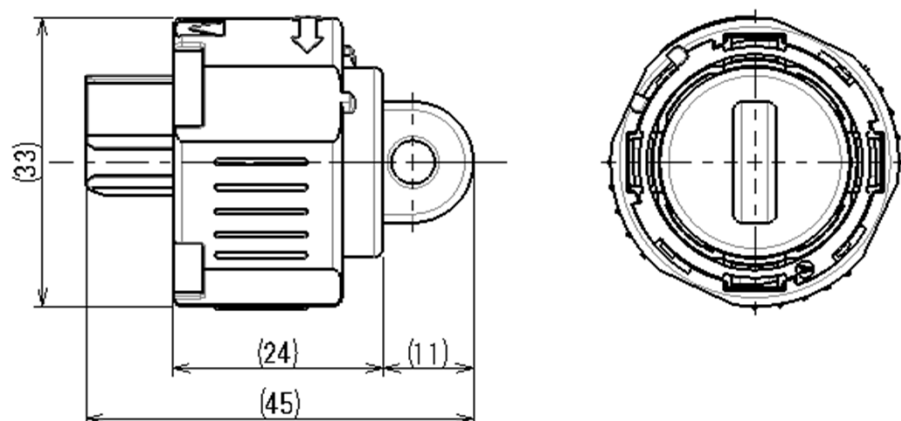
Mated condition

Available as harnessed product only.

Please contact us for details.



Waterproof cap for receptacle: FO-BD7-R-DC



**Notice:**

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products.  
For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below.  
We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

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