

FO-BD7 Series (Outdoor Environmentally Resistant Optical Connector with Thermal Management Design)

Outdoor Environmentally Resistant Optical Connector with Thermal Management Design



JAE has launched an optical communication connector, FO-BD7 Series, for outdoor equipment, such as 5G base stations. The product incorporates an optical module (*SFP+, SFP28, etc.) in the plug connector and is capable of suppressing thermal influence.

With the spread of 5G, there is a growing demand for high performing miniaturized base stations that can be installed in compact spaces. With base stations becoming smaller thermal management becomes a key point in connector design. Especially as base station, which communicate with core networks, have designed in optical modules which can easily be affected by heat. This tends to be a common problem while designing base stations. At times, optical modules require replacement once the base station is installed and as this being a complex process the expectation relies on easier connector replacement.

To cater to these demands we have launched, FO-BD7 Series, an outdoor environmentally resistant optical connector, where the plug connector has an optical module incorporated for heat dissipation.

In this product the optical module is incorporated into the plug connector, where the optical module is standardly installed inside the base station. Our thermal analysis simulations show that the product design secures thermal conduction route improving the heat dissipation of the optical module, providing a solution for thermal management design within the equipment.

With the optical module embedded into the plug connector the operation of replacing the optical module within a base station becomes that much simpler. Besides base stations, this product can be considered for various outdoor devices, such as surveillance cameras.

JAE plans to continue developing new connectors with excellent environment-resistant performance which can be used for outdoor applications, such as optical interfaces connectors for 5G base stations.

Note*: SFP+, SFP28: Optical transceiver Standard

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

Applications

Base stations for mobile phones and smartphones., - Outdoor installed equipment, such as security cameras.

Documents

General Specifications

Applicable Cable Diameter	5 mm
Repeated Mating	Mating area: 50 times LC Connector area: 100times
Cable Clamp Strength	100N min.
Dustproof And Waterproof Performance	IP67 (when mated)
Corrosion Resistance	1,000 hours of salt spray
Operating Temperature Range	-20 deg.C to +65 deg.C (Individual connector)

Notice

1. The values specified in this web site 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 web site 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:

- * 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 evention equipment, etc.

- * 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

4. The products presented in this web site include some products (or components) that fall into the category of "restricted export items" prescribed in Foreign Exchange and Foreign Trade Law. Export permission by the Japanese government is required for exporting or taking any of these products out of Japan. Please contact our sales staff for these items.