

L&KF Co., Ltd.

CATALOG

# EXPANDED BEAM FIBER OPTIC CONNECTOR

Precision Optical Connector Solutions

Industrial · Defense · Telecom · Railway · Aerospace · OEM

**Reliable Connection. Practical Engineering.**

Premium Technical Catalog

Technical review · Specification support · Ordering code structure · Custom assembly consultation

Expanded Beam Connector Solutions

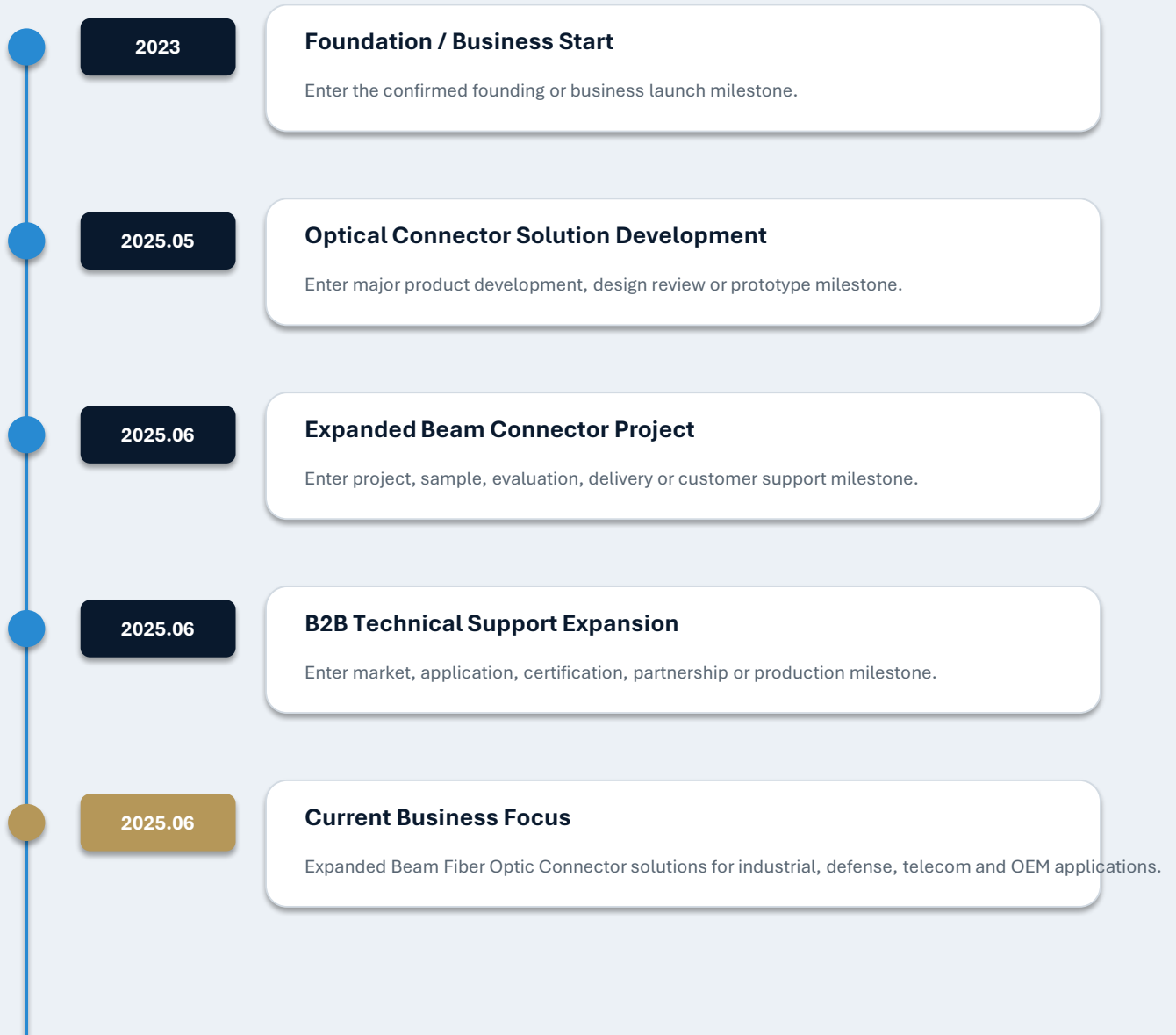
# COMPANY HISTORY

L&KF Co., Ltd. | Expanded Beam Connector Solutions

Back Cover

## A practical engineering partner for precision optical connectivity.

Please replace the editable milestones below with confirmed company history before final printing.



# EXPANDED BEAM CONNECTOR

## Expanded Beam Connector Solutions

Reliable Connection. Practical Engineering.



From technical specification review to cable assembly and ordering code configuration, we provide reliable connection solutions for B2B projects.

Technical Consultation

Specification Support

Ordering Code Setup

Custom Build Review

**Practical connector solutions for repeated mating, outdoor environments, and mobile equipment operation.**

Industrial · Defense · Telecom · OEM Equipment

**Product Line-up**

**PRODUCT LINE-UP**

# Expanded Beam Connector Line-up

We review multiple expanded beam connector configurations according to the mounting method, cable structure, and installation environment of the customer equipment.



### Panel / Bulkhead

Panel-mounted interface for equipment I/O



### Plug Type

For equipment requiring field mating and separation



### Plug & Receptacle

Matched connection set between equipment



### Senior Type

Rugged structure for exposed environments



### Junior Type

Balanced type for industrial equipment



### Mini Type

Compact configuration for limited spaces

**Selection Points** Reviewing channel count, fiber type, cable length, mating method, IP rating, and vibration conditions together helps reduce early specification errors.

[Spec Review](#)

[Sample Support](#)

[Drawing Review](#)

[Delivery Setup](#)

APPLICATIONS

# Applications for Industrial Environments

Suitable for industrial, defense, and telecom equipment projects that require reliable connection quality and field-ready support.

**01 Industrial Communication & Control Systems**  
 Supports reliable connectivity for control equipment, network devices, and data acquisition systems.

**02 Defense, Aerospace, Railway & Mobility**  
 Reviews connector application requirements for equipment exposed to vibration, movement, and repeated operation.

**03 Outdoor & Mobile Networks**  
 Proposes configurations that reduce maintenance burden for field-deployed communication systems and outdoor equipment.

**04 Test, Measurement & OEM Equipment**  
 Supports cable assembly and custom connector configurations based on project requirements.



## Customer Benefits

**Reliable Connectivity**  
 Specification review based on operating environment

**Improved Maintenance Efficiency**  
 Consideration of dust, contamination, and repeated mating

**Development Process Support**  
 Selection, sample, drawing, and delivery support

Providing application environment details and requirements enables more accurate connector and cable configuration review.

**Features & Benefits**

FEATURES & BENEFITS

**Practical Value Delivered by L&KF**

We do not simply supply components. We review connector application direction based on customer equipment and field conditions.

**01 Technical Specification Review**  
 Proposes suitable connector specifications based on equipment structure, mating method, and operating environment.

**02 Repeated Mating Consideration**  
 Reviews configurations for stable operation in equipment requiring frequent field connection and disconnection.



**03 Dust & Contamination Exposure Support**  
 Proposes connection methods that reduce maintenance burden in external environments.

**04 Custom Cable Assembly**  
 Reflects project-specific requirements including cable length, jacket, labeling, packaging, and connector orientation.

**Specification Note**  
 Performance values, protection ratings, and certification criteria should be finalized after confirming the application environment and test conditions.  
 Specification values should be finalized based on selected shell, cable, terminus, and test standard.

## Specification Sheet

## SPECIFICATION SHEET

## LNKF-D38999 Expanded Beam Connector

The table below presents standard catalog-level review specifications. Final performance values should be confirmed based on the selected shell, cable, terminus, and test standard.

Category	Item	Catalog Description / Review Criteria
Optical	Fiber Type	Singlemode 9/125, Multimode 50/125, 62.5/125, OM3 available for review
Optical	Optical Channel	1 / 2 / 4 / 6 / 8 / 12 ch and other project-based configurations
Optical	Insertion Loss	Designed for low-loss configuration; finalized after testing based on channel count, wavelength, and assembly conditions
Optical	Return Loss	SM/MM criteria to be discussed separately; report-based values can be provided if required
Mechanical	Connector Type	Plug, Receptacle, Bulkhead, Panel Mount, Cable Assembly
Mechanical	Shell Size	11 / 13 / 15 / 17 / 25 and other sizes reviewed by application structure
Mechanical	Shell Material	Aluminum Alloy, Stainless Steel, Nickel Aluminum Bronze and other options reviewed
Environmental	Operating Temp.	-40°C to +85°C range available for review; may vary by cable and sealing conditions
Environmental	Ingress Protection	IP67 requirements reviewed after confirming mating conditions and test standards
Environmental	Vibration / Shock	To be discussed according to MIL or industrial test conditions
Environmental	Corrosion Resistance	Material and plating specifications to be discussed for salt spray or environmental tests
Cable	Cable Type	MIL-TAC, Ruggedized Outdoor, Standard Zipcord, Mini Zipcord, Custom Cable
Cable	Cable Retention	Reviewed based on cable structure and cable entry design

※ Items requiring certification, test reports, or guaranteed values should be finalized based on the final specification sheet and test conditions before ordering.

**Technical Datasheet / Test Items**

**TECHNICAL REVIEW**

# Environmental & Mechanical Review Items

The following test and verification items can be selected and reflected in the specification sheet according to field operating conditions.

Test Item	Specification Item	Information Required from Customer
<b>Mating Durability</b>	<b>Repeated mating life</b>	Mating frequency, maintenance cycle, required life
<b>Water / Dust Protection</b>	<b>Water/dust protection rating</b>	IP rating, mated condition, exposure time
<b>Free Fall / Drop</b>	<b>Drop and impact conditions</b>	Drop height, direction, number of repetitions
<b>Vibration / Shock</b>	<b>Vibration and shock test</b>	Standard name, frequency, acceleration, direction
<b>Salt Spray</b>	<b>Corrosion and salt spray</b>	Material, plating, test duration
<b>Cable Retention</b>	<b>Cable tensile retention</b>	Cable OD, entry structure, required load
<b>Optical Test</b>	<b>Insertion loss and return loss</b>	Wavelength, channel count, test report requirement
<b>Temperature</b>	<b>Operating and storage temperature</b>	Min./max. temperature, cable material, sealing conditions

## Product Selection Matrix

<p><b>Panel / Bulkhead</b></p> <p><b>Panel-mounted equipment I/O</b> Internal/external equipment I/O, outdoor enclosures</p>	<p><b>Plug Type</b></p> <p><b>Field mating and separation</b> Mobile communication equipment, test equipment</p>
<p><b>Plug &amp; Receptacle Set</b></p> <p><b>Set supply</b> Standardized equipment-to-equipment connection, simplified purchasing</p>	<p><b>Hybrid Option</b></p> <p><b>Optical + electrical contacts</b> Projects requiring both power/signal and optical links</p>

If detailed product datasheets are available, review-based descriptions can be replaced with confirmed values.

## Ordering Information

## ORDERING INFORMATION

## Model Code Structure

The following code is for ordering review. The actual model name should be finalized based on the final drawing and specification sheet.

**LNKF-EB-A-B-C-D-E-F-G-H-I-J**

A

**Connector Family / Shell Size**

311/313/315/317/325, S/J/M

B

**END A Connector Type**

P, P90, PS, BD, BI

C

**Shell Material / Finish**

A, S, W, F, Custom

D

**Number of Fibers**

1, 2, 4, 6, 8, 12 ch

E

**Electrical Contacts**

0, 2, 4, Hybrid layout

F

**Fiber Type**

09, 50, 60, OM3

G

**Wavelength**

850/1300, 1310/1550, 1310, 1550 nm

H

**Cable Type**

MT, SZ, MZ, OD, CU

I

**END B Connector Type**

Same as A, SC, ST, LC, FC, OE, CA

J

**Length**

005, 010, 2M5, 250, Custom

Ordering Example | LNKF-EB-315-P-A-04-0-09-B-OD-LC-005

**Ordering Information / Request Sheet**

**ORDERING CHECKLIST**

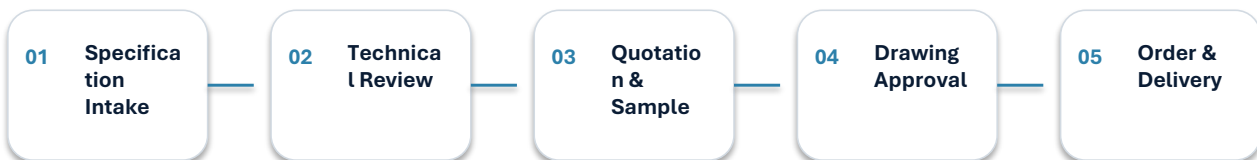
# Pre-order Review Items

Preparing the following information helps speed up specification review, quotation, sample production, and drawing approval.

**Sample Model Code | LNKF-EB-315-P-A-04-0-09-B-OD-LC-005**

Category	Review Details
<b>Project</b>	Target equipment, installation location, purpose, estimated quantity, requested delivery schedule
<b>Optical</b>	Channel count, fiber type, wavelength, IL/RL targets, test report requirement
<b>Connector</b>	Plug / Receptacle / Bulkhead / Panel Mount, shell size, contact style
<b>Environment</b>	Indoor/outdoor use, IP rating, temperature, vibration/shock, corrosion, repeated mating conditions
<b>Cable</b>	Cable type, length, jacket material, entry direction, label, packaging method
<b>Documentation</b>	Drawing, specification sheet, inspection report, certification/test criteria, mass-production approval process

## Order Process



Changes before drawing approval should be reflected and managed in the final model code and specification sheet.

## Customized Expanded Beam Connector Solution

### CUSTOM SUPPORT

# Application Solutions for Customer Equipment

In addition to standard product supply, we support customized configurations based on customer equipment and field conditions. We propose practical application directions from the early design stage.



- 01 Equipment-based Specification Review**  
Reviews suitable configurations considering mounting space, mating method, and cable entry direction.
- 02 Cable Assembly Support**  
Reflects delivery requirements such as length, jacket, connector orientation, labeling, and packaging.
- 03 Project-based Technical Consultation**  
Supports prototype, mass-production review, replacement review, and new development projects.
- 04 Hybrid Configuration Review**  
Reviews applicability for projects requiring both optical signals and electrical contacts.

## Why L&KF

**Technical Expertise**  
Practical review based on expanded beam connector application experience

**Practical Proposals**  
Proposals based on verifiable specifications and delivery conditions

**B2B Project Support**  
Supports purchasing, design, quality, and production-stage discussions

**We support B2B schedules from product selection to sample, drawing, and delivery configuration.**

# EXPANDED BEAM CONNECTOR SOLUTIONS

## Expanded Beam Connector Specialist

We provide solutions suitable for industrial environments through accurate specification review and reliable technical support.



Reliable Connectivity

Flexible Specification  
Support

Specification Support

Ordering Code Setup

## Technical Consultation & Quotation Inquiry

**L&KF Co., Ltd.**

TEL +8210 3950-9605

E-MAIL [simon@lnkf.co.kr](mailto:simon@lnkf.co.kr)

WEB [www.lnkf.co.kr](http://www.lnkf.co.kr)

※ Please replace contact details and address with final information before distribution.

**Reliable Connection. Practical Engineering. L&KF.**