

LEAD Fiber Optics PRODUCT CATALOGUE

FIBER CONNECTOR

Fiber Connector



Fiber Connector mate or connect with optical devices, modules, and fibers. It is one of the most essential components for optical communication. Fiber connector is also the key part used in **fiber patch cord** and fiber Pigtail.

While there are many different types of fiber connectors, they share similar design characteristics. There are three major components of a fiber connector: the ferrule, the connector body, and the coupling mechanism.

Ferrule —Two main **Ceramic Ferrule** sizes are used for Fiber Connectors. The ferrule OD size $\phi 2.5\text{mm}$ is for ST, FC and SC Fiber Connectors. The ferrule OD size $\phi 1.25\text{ mm}$ is for the MU and LC Fiber Connector Versions. PC or UPC or APC refer to how we polish the ferrule of the Fiber Connectors. Single mode fiber connectors can be with PC, or UPC or APC polish, while Multimode Fiber Connectors only with PC or UPC polish.

Connector body — this is a plastic or metal structure that holds the ferrule and attaches to the jacket and strength members of the fiber cable itself.

Coupling mechanism — this is a part of the Fiber Connector body that holds the Fiber Connector in place when it gets attached to another device. It may be a latch clip, a bayonet-style nut, threaded, push-pull and snap-lock or similar device

LFO provide an array of Fiber Connector kits and **Fiber Adapters** for FC, SC,ST, LC, and MU configurations. We Supply Single-mode, Multi-mode, Angle-polished Fiber Connector assemblies with stable qualities that use high quality Ceramic Ferrules.

Fiber Connector

Features

- Compliant with JIS C-5973, Bellcore
- Optical performance 100% factory test
- Precision ceramic ferrule with end-face geometry per IEC proposal
- Low insertion loss
- Low back reflection
- Easy Termination



Applications

- Telecommunication
- CATV Networks
- Data Communication Networks
- Active device termination
- Instrumentation
- Local Area Network

Specifications

ITEM	VALUES
Insertion Loss	≤ 0.15 dB Typical (SM) ≤ 0.2 dB Typical (MM) ≤ 0.3 dB Typical (MTRJ MM)
Return Loss	> 40 dB (PC) > 60 dB(APC)
Temperature Range	$-40^{\circ}\text{C} \sim 75^{\circ}\text{C}$
Durability	< 0.2 dB change after 500 matings

Fiber Connector Ordering information

CN

XX

XX

X

X

X

X

Connector

- 11-ST
- 21-FC/PC
- 22-FC/APC
- 31-SC/PC
- 32-SC/APC
- 33-SC/PC Duplex(with clip)
- 41-LC/PC
- 42-LC/APC
- 43-LC/PC Duplex(with clip)
- 51-MU/PC
- 53-MC/PC Duplex
- 61-MTRJ Female
- 62-MTRJ Male
- 71-FDDI
- 81-MPO
- E2-E2000
- EA-E2000/APC
- XX-Others

Boot Type

- 11- 0.9mm
- 21- 2.0mm Rubber
- 22- 2.0mm Plastic Slotted boot
- 31- 3.0mm Rubber
- 32- 3.0mm Plastic Slotted boot
- 41- 2.4mm Rubber
- 42- 2.4mm Plastic Slotted boot
- 52- 1.8mm Plastic Slotted boot (MTRJ)

Piece type

- P- One-Piece Pre Assemble
- K- Multi-Piece Kit

Ferrule ID

- 1- 125.0um(SM)
- 2- 125.5um(SM)
- 3- 126.0um(MM)
- 4- 127.0um(MM)
- 0- w/o Ferrule(MTRJ)
- X-Others

Dust cap color

- 1-Blue 2-Green
- 3-White 4-Beige
- 5-Black 6-Red
- 7-Yellow 8-Orange
- X-Other Color

Boot color

- 1-Blue 2-Green
- 3-White 4-Beige
- 5-Black 6-Red
- 7-Yellow 8-Orange
- X-Other Color

LFO Fiber Connector Series



ST Fiber Connector

The ST Fiber Connector is comprised of a nickel plated brass body and use a 2.5mm diameter ceramic ferrule with PC end-face. It is offered in MM or SM performances and different boot sizes, including 3.0mm, 2.4mm, 2.0mm, 0.9mm, are available.



FC Fiber Connector

The FC Fiber Connector has a threaded body and use a 2.5mm diameter ceramic ferrule with either PC or APC end-face. It is offered in MM or SM performances and different boot sizes, including 3.0mm, 2.4mm, 2.0mm, 0.9mm, are available.



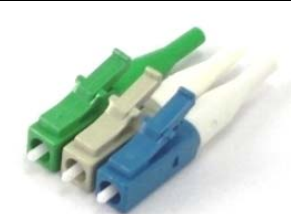
SC Fiber Connector

The SC Fiber connector is comprised of a polymer body and use a 2.5mm diameter ceramic ferrule with either a PC or APC end-face. It is offered in MM or SM performances and different boot sizes, including 3.0mm, 2.4mm, 2.0mm, 0.9mm are available.



FDDI Fiber Connector

The FDDI Fiber connector is a duplex connector designed by ANSI and is utilized in FDDI networks. FDDI connector utilizes two 2.5mm diameter ceramic ferrules. It is offered in MM only.



LC Fiber Connector

The LC Fiber connector is comprised of a polymer body and use a 1.25mm diameter ceramic ferrule with either PC or APC end-face, It is offered in MM or SM performances and different boot sizes, including 2.0mm, 0.9mm are available.



MU Fiber Connector

The MU Fiber Connector is composed of plastic housing and 1.25 mm diameter ceramic ferrule with either PC end-face. It is offered in MM or SM performances and different boot sizes, including 2.0mm, 0.9mm are available.



MTRJ Fiber Connector

The MTRJ Fiber Connector comes from the MT connector. It is a duplex connector with both fibers in a single polymer ferrule. The ferrule and the connector housing is designed to achieve physical contact (PC). It uses pins for alignment and has male and female versions. Multimode only. Available cable types include simplex round cable and zip cable.



MPO Fiber Connector

The MPO Fiber Connector use precision molded MT ferrules, together with metal guide pins and precise housing dimensions ensure fiber alignment when mating. Mass termination in combinations of 4, 8, or 12 fiber ribbon cables are available. Singlemode versions (with APC Polishing) are offered with premium low-loss or standard and multimode versions (with PC polishing) are also available. Available cable types include bare fiber ribbon and ruggedized ribbon (PVC Jacketed).



E2000 Fiber Connector

The E2000 Fiber connector is comprised of a polymer body and use a 1.25mm diameter ceramic ferrule with either a PC or APC end-face. It is offered in MM or SM performances and different boot sizes, including 3.0mm, 2.4mm, 2.0mm, 0.9mm are available.

ST Fiber Connector

Features

- Bayonet style housing for easy termination
- Epoxy and epoxy-less versions
- High precision alignment
- Low insertion and return loss and back reflection*

Applications

- Local Area Networks (LANs)
- Data Processing Networks
- Premise Installations
- Instrumentation



Specifications

ITEM	SM / PC	Multi Mode
Insertion Loss(dB)	< 0.2	< 0.3
Return Loss(dB)	> 40	-
Durability:500matings(dB)	< 0.2	< 0.2
Operation temperature	-40°C ~ 85°C	-40°C ~ 85°C
Ferrule Type	Standard	Standard
Body Material	Zinc die-casting	
Cable Type	0.9 / 2.0 / 2.4 / 3.0 / Zip Cable	
Boot Type	Variety of Color , Design available	

FC Fiber Connector

Features

- Corrosion resistant body
- Inner Key and Key Ring styles available
- Variety of boot types and colors

Applications

- CATV
- Active device termination
- Telecommunication networks
- Test equipment
- Multimedia
- Premise installations



Specifications

ITEM	SM / PC	SM / APC	Multi Mode
Insertion Loss(dB)	< 0.2	<0.2	<0.3
Return Loss(dB)	> 40	> 60	-
Durability:500matings(dB)	< 0.2	< 0.2	< 0.2
Ferrule Type	Standard	Step / Conical	Standard
Body Material	Nickel plated brass		
Cable	0.9 / 2.0 / 2.4 / 3.0 / Zip Cable		
Boot Type	Variety of Color , Design available		

SC Fiber Connector

Features

- NTT-SC compatibility
- Low insertion loss and back reflection
- One-piece construction and pull-proof design
- Free-floating pre-radiused ceramic ferrule
- Precision anti-rotation key
- Corrosion resistant body
- UL-rated plastic housing and boots in a variety of colors

Applications

- CATV
- Active device termination
- Test equipment
- Telecommunication networks
- Multimedia
- Premise installations



Specifications

ITEM	SM / PC	SM / APC	Multi Mode
Insertion Loss(dB)	< 0.2	< 0.2	< 0.3
Return Loss(dB)	> 40	> 60	-
Durability:500matings(dB)	< 0.2	< 0.2	< 0.2
Ferrule Type	Standard	Step / Conical	Standard
Cable	0.9 / 2.0 / 2.4 / 3.0 / Zip Cable		
Boot Type	Variety of Color , Design available		

FDDI Fiber Connector

Features

- Color-coded connector keys
- 100% optically inspected and tested for insertion loss
- Molded form construction
- Immune to electrical interference

Applications

- Gigabit Ethernet
- FDDI
- Multimedia
- ATM
- any application that requires high-speed data transfer



Specifications

ITEM	Multi Mode
Insertion Loss(dB)	< 0.2
Return Loss(dB)	-
Durability:500matings(dB)	< 0.2
Cable Type	Duplex round /Zip Cable
Boot Type	Duplex round cable/ Zip cable

LC Fiber Connector

Features

- Telecom / Datacom
- LANs, CATV
- Fiber to the Home
- Premises Distribution
- Gigabit Applications (Ethernet, ATM, SONET, etc.)

Applications

- Compact, pull-proof design, with RJ-45 style interface
- Fully compatible with standard LC products
- Optional anti-snag simplex collar and duplex clip
- Connector body can be used for both simplex and duplex configurations
- Low insertion loss
- Low return loss
- Plastic housing and boot made from UL-rated materials



Specifications

ITEM	SM / PC	SM / APC	Multi Mode
Insertion Loss(dB)	< 0.2	< 0.2	< 0.3
Return Loss(dB)	> 40	> 60	-
Durability:500matings(dB)	< 0.2	< 0.2	< 0.2
Ferrule Type	Standard	Step / Conical	Standard
Cable	0.9 / 2.0 / Zip Cable		
Boot Type	Variety of Color , Design available		

MU Fiber Connector

Features

- NTT-MU hardware compatibility
- NTT & JIS compliance*
- Compact, pull-proof design
- High precision alignment
- One piece construction
- Tunable ceramic connector ferrule
- Corrosion resistant body
- UL-Rated plastic housing and boot
- Universal Duplex Clip
- Low insertion loss & back reflection

Applications

- CATV
- Video
- Active Device Termination
- Premise Installations
- Telecommunication Networks
- Local Area Networks (LANs)
- Data processing networks
- Wide Area Networks (WANs)



Specifications

ITEM	Single Mode	Multi Mode
Insertion Loss(dB)	< 0.2	< 0.3
Return Loss(dB)	> 40	-
Durability:500matings(dB)	< 0.2	< 0.2
Ferrule Type	Standard	Standard
Cable	0.9 / 2.0 / Zip Cable	
Boot Type	Blue, Variety of Color , Design available	

MTRJ Fiber Connector

Features

- Precision molded MT ferrule
- High precision guide pins for exact alignment
- Duplex ferrule
- Plug-jack (RJ-45) design
- TIA/EIA 568-A Compliant*
- Polishing does not require diamond film

Applications

- Asynchronous Transmission Mode (ATM)
- Gigabit Ethernet
- CATV, Video and Multimedia
- Active Device/Transceiver Interface
- Premise Installations
- Telecommunication Networks
- Industrial
- Military
- Parallel optical interconnect between PC Cards and patch panels
- Interconnection for O/E modules
- Optical Switch interframe connections



Female-kit



Male-kit

Specifications

ITEM	Single Mode	Multi Mode
Insertion Loss(dB)	< 0.7	< 0.7
Return Loss(dB)	> 26	-
Durability:500matings(dB)	< 0.3	< 0.3
Cable Type	Simplex round cable / Zip Cable	
Boot Type	Simplex round cable/Zip cable	

MPO Fiber Connector

Features

- Precision molded MT ferrule
- High precision guide pins for exact alignment
- Compact design, up to 24 fiber ribbons
- IEC 61754-7 Compliant*
- Telcordia GR-1435-CORE compliant*
- Polishing does not require diamond film

Applications

- Parallel optical interconnect between PC cards and patch panels
- Interconnection for O/E modules
- Optical Switch interframe connections
- Gigabit Ethernet
- CATV
- Video
- Active Device / Transceiver Interface
- Premise Installations
- Telecommunication Networks
- Multimedia



Specifications

ITEM	Low Loss /SM	SM	Multi Mode
Insertion Loss(dB)	< 0.35	0.75	< 0.5
Return Loss(dB)	≥ 50	≥ 50	-
Cable Type	4,8,12,24 Bare fiber ribbon / Rugged zed ribbon		
Boot Type	Variety of Color , Design available		

E2000 Fiber Connector

Features

- Secure transmission of high bit-rate protocols
- Ceramic ferrule fully protected by spring loaded shutter
- Push-pull locking mechanism for easy installation
- Color coded release levers
- Compliant with European (EN 186270) and International (IEC 61754-15) standards

Applications

- Telecommunication
- CATV
- LAN(including FITH,FTTH and FTTD)



Specifications

ITEM	SM / PC	SM / APC	Multi Mode
Insertion Loss(dB)	< 0.2	< 0.2	< 0.3
Return Loss(dB)	> 40	> 60	-
Durability:500matings(dB)	< 0.2	< 0.2	< 0.2
Ferrule Type	Standard	Step / Conical	Standard
Cable	0.9 / 2.0 / 2.4 / 3.0		
Boot Type	Variety of Color , Design available		

DYSFO

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