

Optical Fiber

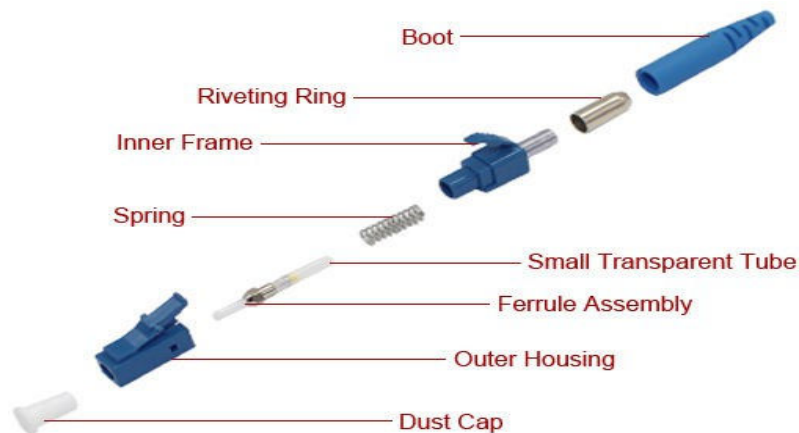
TECHNICAL DATA SHEET

Fiber Optic LC/UPC SX Connector blue



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Product Description:



The LC/UPC connector is a small form-factor optical fiber connector designed for precision single-mode fiber termination. It utilizes a 1.25 mm zirconia ceramic ferrule to ensure accurate fiber core alignment and stable optical performance. The connector follows the LC interface standard defined in IEC 61754-20 by the International Electrotechnical Commission. The UPC end-face geometry provides a convex, polished surface that minimizes insertion loss and reduces back reflection. UPC connectors typically achieve return loss ≥ 50 –55 dB, making them suitable for high-performance single-mode transmission systems.

Applications:

- FTTH and FTTx networks
- LAN, WAN, and telecom infrastructure
- SFP/SFP+ optical transceivers
- Patch panels and Optical Distribution Frames (ODF)



Technical Specifications:

Parameter	Specification
Ferrule Diameter	1.25 mm zirconia ceramic
Polish Type	UPC (Ultra Physical Contact)
Insertion Loss	≤ 0.3 dB (Typical)
Return Loss	≥ 50–55 dB
Durability	≥ 500–1000 mating cycles
Operating Wavelength	1310 nm / 1550 nm
Operating Temperature	–40°C to +85°C
Connector Mechanism	Push-pull latch system

Benefits:

- Supports long-distance transmission with low attenuation (single-mode 9/125 μm).
- Provides stable and precise fiber alignment using 1.25 mm zirconia ceramic ferrule.
- Minimizes back reflection due to UPC polish (high return loss ≥ 50 dB).
- Maintains strong signal strength with low insertion loss (≤ 0.3 dB).
- Enables high-density installations thanks to compact LC form factor.
- Ensures secure and easy connection with push-pull latch mechanism.
- Offers high durability (500–1000 mating cycles).
- Operates reliably in wide temperature range (-40°C to $+85^{\circ}\text{C}$).



Raw Materials Detailed List:

Item	Part	Material	ROHS Compliance
1	Anti-dust Cap	LDPE	Yes
2	Housing	PBT	Yes
3	Inner Core	PBT	Yes
4	Spring	SUS304 Stainless Steel	Yes
5	Ferrule	Zirconia Ceramic	Yes
6	Body	Copper Alloy	Yes
7	Boot	TPV	Yes