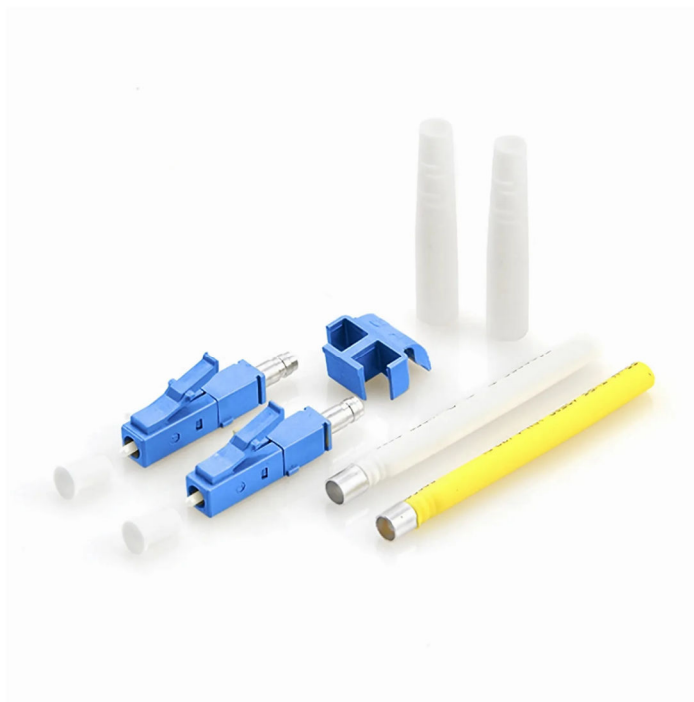


Optical Fiber

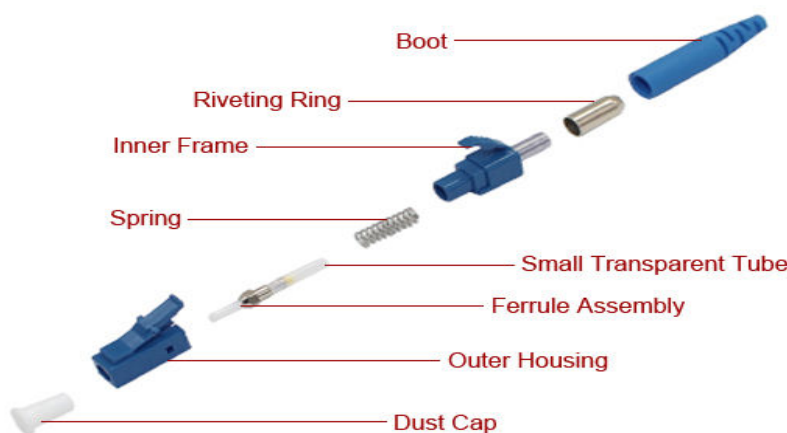
TECHNICAL DATA SHEET

Fiber Optic LC/UPC DX Connector blue



Fiber Optic LC/UPC DX Connector blue

Product Description:



The LC UPC Duplex connector is a high-performance fiber optic connector designed for single-mode or multimode networks requiring low insertion loss, high return loss, and compact, high-density connectivity. It features a 1.25 mm zirconia ceramic ferrule with an Ultra Physical Contact (UPC) polish, providing a flat, precise end-face that minimizes back-reflection. The duplex design integrates two fibers in a single connector housing, allowing simultaneous transmit and receive channels, simplifying bi-directional communication in patch panels, telecom racks, or data center applications. The connector is compatible with LC adapter panels and duplex patch cords, supporting high-speed networks (1 G – 100 G+).

It meets IEC 61754-20, TIA-604-10 (FOCIS-10), RoHS, and Telcordia GR-326 standards, ensuring interoperability, durability (≥ 1000 mating cycles), and reliable optical performance across various environmental conditions.

Applications:

- Data centers (switch-to-server connections)
- Telecommunications networks (long-distance single-mode links)
- Enterprise LAN networks (Gigabit/10/40/100 GbE)
- FTTH (Fiber to the Home) deployments
- Patch panels and optical distribution frames (ODFs)
- High-speed Ethernet and optical links



Technical Specifications:

Parameter	Value
Fiber Mode	Single-mode OS2 (9/125 μm) or Multimode OM3/OM4 (50/125 μm)
Number of Fibers	2 (duplex)
Insertion Loss (Connector)	≤ 0.3 dB per connector end (typical)
Return Loss	≥ 50 dB (UPC polished connectors)
Wavelengths	Typical: 1310 nm / 1550 nm (SM), 850 nm / 1300 nm (MM)
Durability (Mating Cycles)	≥ 1000 cycles
Ferrule Concentricity	≤ 1 μm (single-mode)
Operating Temperature	~ -40 °C to $+70/75$ °C
Storage Temperature	~ -40 °C to $+85$ °C

Benefits:

- **Low insertion loss** (≤ 0.3 dB) for efficient signal transmission
- **High return loss** (≥ 50 dB) reducing back-reflection
- **Compact duplex design** supports high-density installations
- **Reliable bidirectional communication** (Tx/Rx in one connector)
- **Durable ferrule** (zirconia, ≥ 1000 mating cycles)
- **Standards-compliant** (IEC 61754-20, TIA-604-10, Telcordia GR-326, RoHS)
- **Versatile applications** across data centers, telecom, enterprise, and FTTH networks



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