

Optical Fiber

TECHNICAL DATA SHEET

Fiber Optic ST/UPC SX Connector



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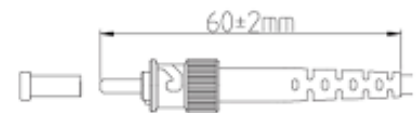
Product Description:

The ST UPC Connector is a single-mode fiber optic connector featuring a UPC (Ultra Physical Contact) polish. Designed for low insertion loss and stable optical performance, it uses a bayonet-style ST coupling for secure and easy field installation. This connector is widely used in telecom, FTTH, LAN/WAN, and data center applications.



Applications:

- FTTH (Fiber-to-the-Home) networks
- PON / GPON networks
- LAN / WAN fiber infrastructure
- Telecom backbone networks
- Data centers and server racks
- CATV optical networks
- Fiber patch cords and patch panels
- Optical test and measurement equipment



Technical Specifications:

Parameter	Specification
Connector Type	ST (Bayonet Twist-Lock)
Polish Type	UPC (Ultra Physical Contact)
Fiber Type	Single-Mode (9/125 μm)
Ferrule Material	Zirconia Ceramic
Ferrule Diameter	2.5 mm
Insertion Loss (IL)	≤ 0.3 dB (Typical)
Return Loss (RL)	≥ 50 –55 dB
Operating Wavelength	1310 nm, 1490 nm, 1550 nm
Cable Jacket Diameter	2–3 mm
Operating Temperature	-40 °C to +85 °C
Durability (Mating Cycles)	≥ 500 cycles
Housing Material	PBT (Polybutylene Terephthalate)
Boot Material	TPV / TPU (Thermoplastic Elastomer)
Standards Compliance	IEC 61754-2, Telcordia GR-326-CORE
RoHS Compliance	Yes

Benefits:

- Low Insertion Loss – Ensures high-quality signal transmission (≤ 0.3 dB).
- High Return Loss – UPC polish reduces back-reflection (≥ 50 – 55 dB).
- Reliable Bayonet Connection – Twist-lock design ensures secure mechanical coupling.
- Durable Ferrule – Zirconia ceramic ferrule ensures precise fiber alignment.
- Wide Operating Temperature – Functions reliably from -40 °C to $+85$ °C.
- High Durability – Designed for ≥ 500 mating cycles without performance loss.
- Flexible Boot – Compatible with standard 2–3 mm jacketed fiber cables.
- Standards Compliant – IEC 61754-2 and Telcordia GR-326-CORE.
- RoHS Compliant – Safe for global deployment.



Raw Materials Detailed List:

Item	Part	Material	RoHS Compliance
1	Anti-dust Cap	LDPE (Low-Density Polyethylene)	Yes
2	Housing	PBT (Polybutylene Terephthalate)	Yes
3	Inner Core	PBT (Polybutylene Terephthalate)	Yes
4	Ferrule	Zirconia Ceramic (2.5 mm)	Yes
5	Spring	SUS304 Stainless Steel	Yes
6	Body	Copper Alloy	Yes
7	Boot (Strain Relief)	TPV / TPU (Thermoplastic Elastomer)	Yes