

Optical Fiber

TECHNICAL DATA SHEET

Fiber Optic SC/UPC SX Connector blue



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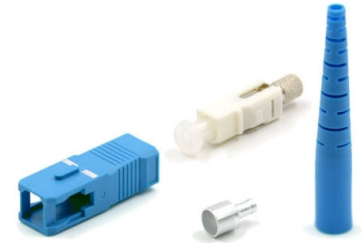
Product Description:



The SC UPC SX Connector is a single-mode simplex fiber optic connector designed for high-performance optical communication networks. It features a SC (Subscriber Connector) push-pull coupling mechanism combined with a UPC (Ultra Physical Contact) polish, ensuring low insertion loss and stable optical transmission with reduced back reflection.

Applications:

- FTTH (Fiber-to-the-Home) access networks
- Passive Optical Networks (PON)
- LAN and WAN fiber optic infrastructure
- Telecom central offices and backbone networks
- Data centers and patch panel connections
- Fiber optic distribution frames (ODF)
- CATV and broadband systems
- Optical test and measurement equipment
- Fiber patch cords and pigtails
- Enterprise campus networks



Technical Specifications:

Parameter	Specification
Connector Type	SC (Subscriber Connector), Simplex (SX)
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	2.0 mm / 3.0 mm
Operating Temperature	-40 °C to +85 °C
Durability (Mating Cycles)	≥ 500 cycles
Housing Material	PBT (Polybutylene Terephthalate)
Boot Material	TPU / TPV
Standards Compliance	IEC 61754-4, Telcordia GR-326-CORE
RoHS Compliance	Yes

Benefits:

- Low Insertion Loss – Ensures efficient optical signal transmission with minimal attenuation (typically ≤ 0.3 dB).
- High Return Loss – UPC polish provides good back-reflection performance (≥ 50 – 55 dB), suitable for most single-mode applications.
- Reliable Push-Pull Design – SC connector offers secure, easy, and quick installation without twisting.
- Precise Fiber Alignment – 2.5 mm zirconia ceramic ferrule ensures stable optical performance and repeatability.
- Simplex Configuration – Compact single-fiber design ideal for point-to-point connections.
- High Durability – Supports ≥ 500 mating cycles with consistent performance.
- Wide Temperature Operation – Suitable for environments from -40 °C to $+85$ °C.



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	Crimp Ring	Nickel-Plated Copper / Copper Alloy	Yes
7	Boot (Strain Relief)	TPU / TPV (Thermoplastic Elastomer)	Yes