

Optical Fiber Adapter

TECHNICAL DATA SHEET

SC Adapter SM-SX-UPC 2.5mm Single Mode



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Product Description:

The SC Adapter SM-SX-UPC 2.5 mm Single Mode is a high-precision fiber optic adapter designed to connect two SC/UPC single-mode simplex fiber optic connectors with minimal signal loss.

It features a precision ceramic alignment sleeve that ensures accurate fiber core alignment for stable optical transmission and low insertion loss. The adapter is widely used in FTTH networks, telecom systems, patch panels, ODFs, and data center applications.



Features:

- SC/UPC simplex single-mode adapter
- Precision 2.5 mm ceramic sleeve
- Low insertion loss and high return loss
- Stable and reliable optical connection
- Snap-in installation for patch panels and ODFs
- High durability and repeatability
- Dust cap protection for cleaner connections
- Compact lightweight design

Applications:

- FTTH (Fiber to the Home)
- Optical Distribution Frames (ODF)
- Fiber patch panels
- Telecom and communication systems
- Data centers and enterprise networks
- CATV and broadband infrastructure

Benefits:

- Ensures precise fiber alignment
- Reduces optical signal attenuation
- Improves network reliability
- Supports stable high-speed transmission
- Long operational service life
- Easy installation and maintenance



Technical Specifications:

Parameter	Specification
Connector Type	SC Simplex (SX)
Fiber Type	Single Mode (SMF 9/125 μm)
Ferrule Size	2.5 mm (SC Standard)
Polish Type	UPC (Ultra Physical Contact)
Insertion Loss	≤ 0.2 dB (Typical), ≤ 0.3 dB Max
Return Loss	≥ 50 dB (UPC)
Alignment Sleeve	Zirconia Ceramic
Mating Durability	≥ 1000 Cycles
Repeatability	≤ 0.2 dB Variation
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Humidity	Up to 95%
Compliance Standards	IEC 61754-4, TIA/EIA 604-3
RoHS Compliance	Yes
Color	Blue (UPC Identification)

Environmental Specifications:

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	Up to 95%
Flame Rating	UL94-V0 (Optional)
Vibration Resistance	Stable Optical Performance Under Vibration
Shock Resistance	High Mechanical Durability
Dust Protection	With Dust Caps
Indoor / Outdoor Use	Primarily Indoor Applications
RoHS Compliance	Yes