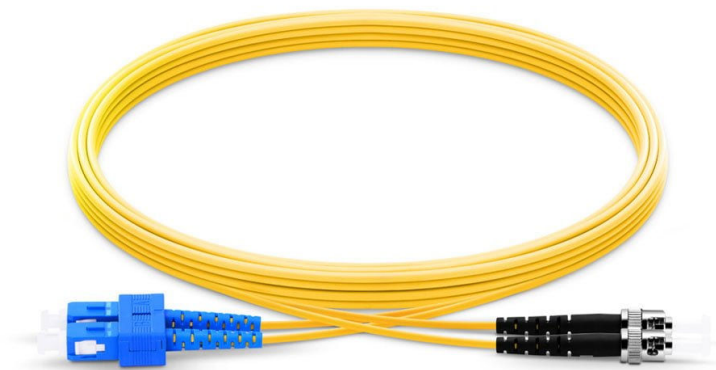


Optical Fiber Patch Cord

TECHNICAL DATA SHEET

**LSZH Fiber Optic Patch Cord SM
(G.657A1) 9/125 (SC-UPC/ST-UPC)
Duplex 3.0 mm**

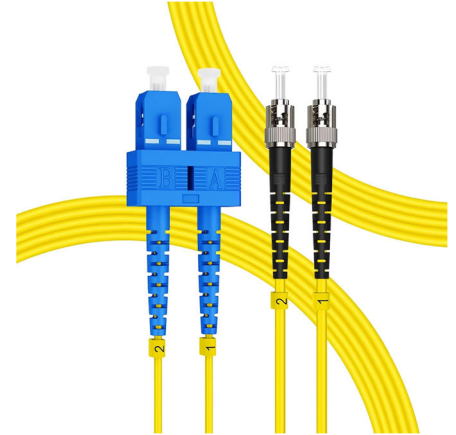


LSZH Fiber Optic Patch Cord SM (G.657A1) 9/125 (SC-UPC /ST-UPC) Duplex (3.0 mm)

Product Description:

The LSZH Fiber Optic Patch Cord Single Mode G.657.A1 (9/125 μm) SC-UPC to ST-UPC Duplex 3.0 mm is a hybrid optical cable designed for reliable and low-loss data transmission in fiber optic networks.

It combines a **SC/UPC connector** (push-pull type, widely used in telecom and FTTH) with a **ST/UPC connector** (bayonet-style, commonly used in legacy and industrial systems), allowing seamless integration between different equipment interfaces.



The duplex structure supports simultaneous transmit and receive (Tx/Rx), while the G.657.A1 bend-insensitive fiber ensures stable performance in tight routing environments.

Features:

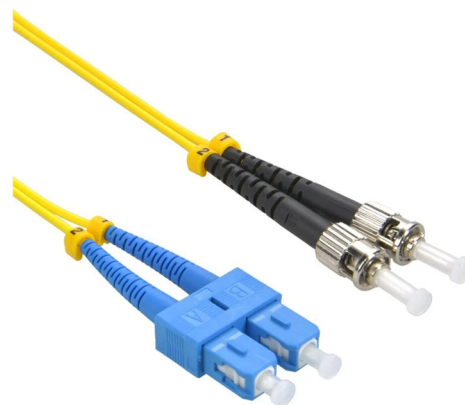
- Hybrid SC to ST connectivity for flexible integration
- Duplex design for simultaneous Tx/Rx communication
- G.657.A1 bend-insensitive fiber for tight routing
- LSZH jacket for enhanced fire safety
- Low insertion loss and high return loss
- Secure ST bayonet locking mechanism
- Compact SC connector for easy installation
- Durable 3.0 mm cable for long service life

Fiber Specifications:

Parameter	Value
Fiber Type	Single Mode
Standard	ITU-T G.657.A1
Core Diameter	9 μm
Cladding Diameter	125 μm
Operating Wavelength	1310 nm / 1550 nm
Attenuation @1310 nm	≤ 0.35 dB/km
Attenuation @1550 nm	≤ 0.22 dB/km
Mode Field Diameter	$\sim 8.6\text{--}9.2$ μm
Numerical Aperture	~ 0.13
Minimum Bend Radius	~ 10 mm
Compatibility	Fully compatible with G.652.D

Applications:

- Telecom and legacy systems (ST interface compatibility)
- FTTH (Fiber to the Home) networks
- Data centers and structured cabling
- Optical Distribution Frames (ODF)
- Industrial and broadcast communication systems
- Network equipment interconnection



Optical Performance:

Parameter	Value
Insertion Loss	$\leq 0.2 - 0.3$ dB
Return Loss	≥ 50 dB (UPC)
Repeatability	≤ 0.1 dB
Durability	≥ 1000 mating cycles
Signal Stability	High

Environmental Conditions:

- Operating Temperature: -40°C to $+85^{\circ}\text{C}$
- Storage Temperature: -45°C to $+85^{\circ}\text{C}$
- Suitable for indoor telecom and data center environments

Safety Features:

- LSZH jacket emits **low smoke and zero halogen gases** in case of fire
- Suitable for indoor environments (data centers, telecom rooms, buildings)
- Flame-retardant and environmentally safer than PVC
- Strong resistance to bending, pulling, and mechanical stress