

Optical Fiber Patch Cord

TECHNICAL DATA SHEET

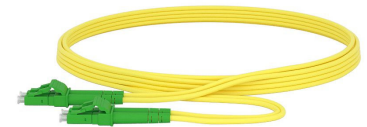
**LSZH Fiber Optic Patch Cord SM
(G.657A1) 9/125 (LC-APC/LC-APC)
Duplex (3.0mm)**



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Product Description:

The LSZH Fiber Optic Patch Cord Single Mode G.657.A1 (9/125 μm) LC-APC to LC-APC Duplex 3.0 mm is a high-performance optical interconnect solution designed for ultra-low back reflection and stable high-speed data transmission.



It uses LC connectors with APC (Angled Physical Contact) polishing, which significantly reduces reflection levels, making it ideal for sensitive optical networks such as GPON, FTTH, CATV, and telecom backbone systems. The duplex structure enables simultaneous transmit and receive (Tx/Rx), while the G.657.A1 bend-insensitive fiber ensures reliable performance in tight installation spaces.

Features:

- LC small form factor for high-density installations
- APC polishing for ultra-low back reflection
- Duplex design for simultaneous Tx/Rx communication
- G.657.A1 bend-insensitive fiber for tight routing
- LSZH jacket for enhanced fire safety
- High stability and low insertion loss performance
- Long-term reliability in harsh environments



Applications:

- FTTH (Fiber to the Home) networks
- GPON / EPON passive optical networks
- Telecom backbone and metro networks
- Data centers and cloud infrastructure
- Optical Distribution Frames (ODF)
- CATV fiber optic transmission systems
- High-density optical patching environments



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
Bend Radius	Low bend-insensitive performance
Compatibility	G.652.D compatible

Optical Properties:

Parameter	Value
Insertion Loss	≤ 0.3 dB
Return Loss (APC)	$\geq 60-65$ dB
Repeatability	≤ 0.1 dB
Durability	≥ 1000 mating cycles
Signal Stability	Very high

Environmental & Mechanical:

- Operating Temperature: -40°C to $+85^{\circ}\text{C}$
- Storage Temperature: -45°C to $+85^{\circ}\text{C}$
- Installation Environment: Indoor / Telecom / Data Center