



FIBERMANIA

Shenzhen FiberMania Technology Co., Ltd.
optical-fibercables.com

LC UPC Duplex OM3 LSZH Aqua Jacket Armored Optical Fiber Patch Cord

Our Product Introduction

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Basic Information

- Place of Origin: CN
- Brand Name: FiberMania
- Certification: RoHS, CE, ISO9001
- Minimum Order Quantity: 10
- Price: 1.1 - 2.5
- Packaging Details: Standard Packing
- Delivery Time: 3-7 days
- Payment Terms: L/C, D/A, D/P, T/T, Western Union, MoneyGram



Product Specification

- Connector A: LC/UPC
- Connector B: LC/UPC
- Fiber Count: Duplex
- Mode: OM3 50/125μm
- Wavelength: 850/1300nm
- Fiber Grade: Bend Insensitive
- Cable Diameters: 2.0mm/3.0mm
- Insertion Loss: ≤0.3dB
- Return Loss: ≥35dB
- Min. Bend Radius (Fiber Cable): 20/10D (Dynamic/Static)
- Polarity: A (Tx) To B (Rx)
- Operating Temperature: -25~70°C
- Storage Temperature: -25~70°C
- Fiber Cords Structure: Stainless Steel Tube



More Images



Product Description

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Armored fiber optic patch cords are ruggedized optical cables built with either single-mode or multimode fibers at the core, reinforced by a metal armor layer—typically stainless steel or aluminum—and protected by an outer jacket made of PVC or PE. This strengthened structure delivers exceptional mechanical durability: the metal armor greatly improves resistance to pulling, crushing, and bending, enabling the patch cords to withstand heavy external pressure and physical impact. The outer jacket further enhances moisture resistance, dust protection, and overall weatherability, making these cables ideal for deployment in harsh environments such as extreme temperatures, high humidity, or industrial settings. The metal layer also provides effective shielding against electromagnetic interference.

Despite the robust construction, armored patch cords maintain optical performance comparable to standard patch cords, featuring **insertion loss ≤ 0.3 dB** and **return loss ≥ 40 dB** for stable, low-loss signal transmission. They can be terminated with a full range of connector types—SC, LC, FC, ST—to ensure broad compatibility with various equipment and interfaces.

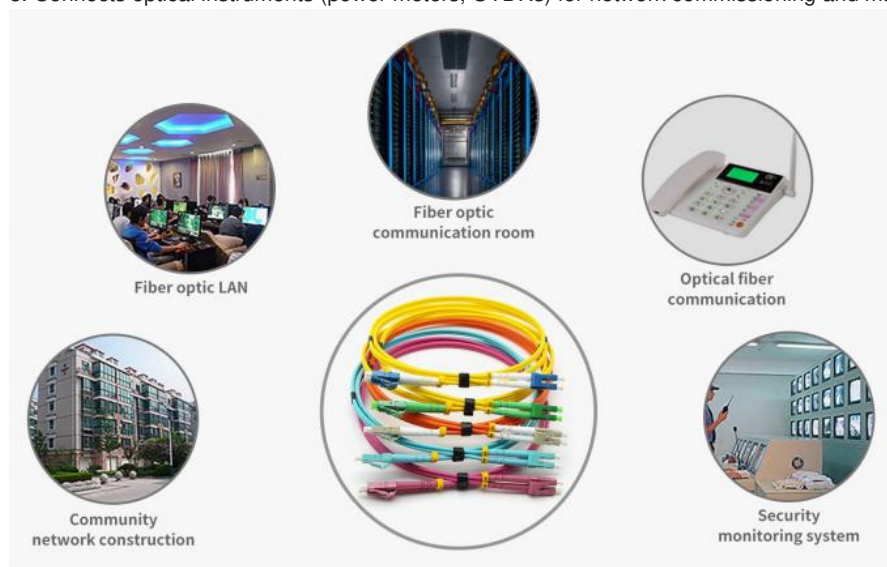
Designed for environments where cables face frequent movement, mechanical stress, or demanding conditions—including outdoor runs, industrial automation, and data center infrastructure—these armored patch cords offer a highly reliable combination of **durability, protection, and optical performance**.

Features

1. Supports multiple light modes via a larger core (50 μ m/62.5 μ m), ideal for short-distance, high-bandwidth LAN applications.
2. Typically 50 μ m (OM3/OM4/OM5) or 62.5 μ m (OM1), enabling easier light coupling and lower connector alignment requirements.
3. Designed for distances up to 550m (10Gbps) or 2km (1Gbps), balancing cost and performance for campus/building networks.
4. Operates at 850nm (most common) and 1300nm, with OM3/OM4/OM5 supporting 850nm VCSEL-based high-speed transmission.
5. More economical than single-mode due to relaxed manufacturing tolerances and compatible with cheaper VCSEL light sources.
6. OM5 supports up to 400Gbps over 500m using wavelength division multiplexing (WDM) across 850-950nm bands.
7. Uses LC, SC, ST connectors (simplex/duplex) with low insertion loss (<0.5dB) and return loss (>30dB for UPC).
8. Durable PVC/LSZH jackets and bend-insensitive OM4/OM5 types suitable for tight-radius cabling in data centers.

Applications

1. Connects switches, routers, and endpoints in office/building networks for 1Gbps-400Gbps short-distance data transfer.
2. Links servers, storage arrays, and top-of-rack switches within the same rack or cabinet (≤ 100 m).
3. Transmits HD/4K video signals from cameras to NVRs in campus/industrial security networks.
4. Provides low-latency connectivity for Fibre Channel devices in storage clusters.
5. Connects sensors, PLCs, and control systems in factory automation with ruggedized armored jackets.
6. Links buildings within a campus or industrial park over distances up to 2km.
7. Delivers high-speed connectivity to individual workstations in multi-tenant commercial buildings.
8. Connects optical instruments (power meters, OTDRs) for network commissioning and maintenance.



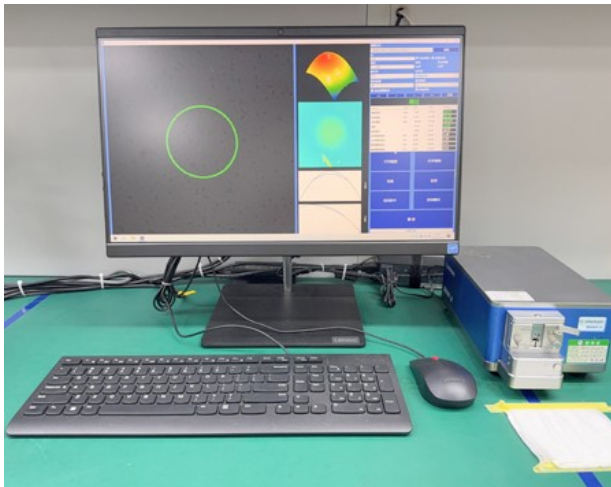
Fiber optic patch cord, widely used in local, data, and image transmission networks, is crucial for ensuring high-quality signal integrity. It tests and monitors optical signals in CATV systems, verifies data packet accuracy in data networks to prevent loss/latency, and optimizes optical pathways for high-quality video in image networks (e.g., broadcasting). Additionally, photoelectric automatic control systems use advanced photodetectors and sensors to automate industrial processes: measuring light intensity, converting it to electrical signals for real-time adjustments, and enhancing operational efficiency and precision.

Quality Control and Testing Program



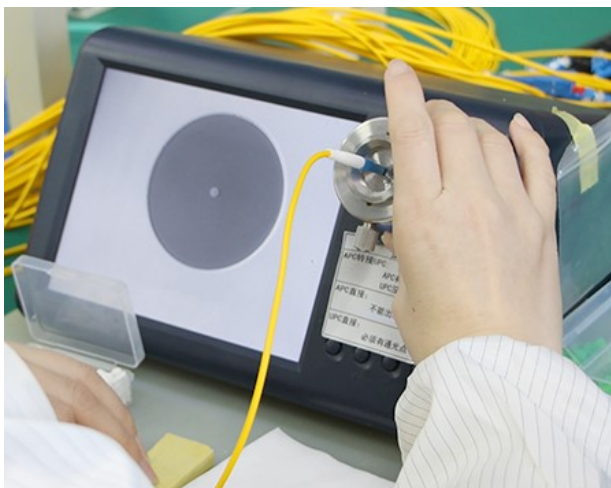
IL and RL Testing

Conduct testing on the insertion loss and return loss of cables to verify their reach and ensure stable signal transmission.



3D Interferometer Testing

Evaluate the connectors or ferrules of cables to verify that the apex offset, radius of curvature, and fiber height are within the specified parameters, ensuring a successful connection of fiber optic lines.



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Production Line and Equipment



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