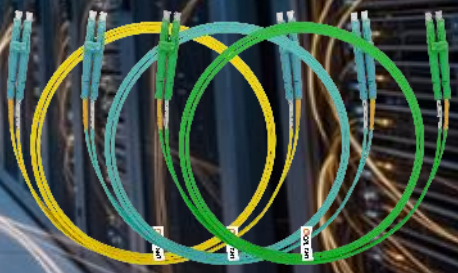
Product Specification

LC Duplex to LC Duplex Fiber Optic Patch Cords

OS2 Single-Mode / OM3, OM4 & OM5 Multimode
2-Fiber | LC/UPC Duplex | 2.0 mm PVC Riser



Features

- LC/UPC duplex connectors on both ends
- Available in OS2, OM3, OM4, and OM5 fiber types
- 2-fiber duplex configuration
- 2.0 mm PVC riser-rated cable jacket
- Low insertion loss and high return loss
- Factory terminated and individually tested
- Available in custom lengths from 1 m to 100 m

Compliance

- RoHS Directive 2011/65/EU and (EU) 2015/863
- ANSI/TIA-568.3-E
- IEC 61754-20 (LC Connector Interface)
- UL 1666 (OFNR Riser Rating)

Applications

- Data Center and Enterprise Networks
- Telecommunications and Optical Access Networks
- LAN and WAN Fiber Interconnections
- Network Equipment and Fiber Patch Panels

Description

AICPLIGHT LC Duplex to LC Duplex Fiber Optic Patch Cords are designed to provide reliable optical connectivity for data centers, enterprise networks, telecommunications systems, and fiber distribution environments.

This product family features a 2-fiber duplex configuration with LC/UPC connectors on both ends and is available in OS2 single-mode and OM3, OM4, and OM5 multimode fiber options. The different fiber grades support a wide range of optical transmission requirements, from conventional single-mode links to high-bandwidth multimode network applications.

Featuring a 2.0 mm PVC riser-rated cable jacket, low insertion loss, and factory-terminated connectors, these patch cords provide flexible connectivity between switches, servers, optical transceivers, patch panels, and other fiber-optic equipment.

Available in multiple lengths from 1 m to 100 m, the series supports flexible fiber management and reliable optical interconnections in various networking environments.

Product Performance Specifications

1、Model Configuration

Parameter	S2-2F-LCU-LCU	M5-2F-LCU-LCU	M4-2F-LCU-LCU	M3-2F-LCU-LCU
Fiber Mode	Single-Mode	Multimode	Multimode	Multimode
Fiber Type	OS2	OM5	OM4	OM3
Fiber Count	2 Fibers	2 Fibers	2 Fibers	2 Fibers
Connector A	LC Duplex	LC Duplex	LC Duplex	LC Duplex
Connector B	LC Duplex	LC Duplex	LC Duplex	LC Duplex
Polish Type	UPC / UPC	UPC / UPC	UPC / UPC	UPC / UPC
Connector Ferrule	Zirconia Ceramic	Zirconia Ceramic	Zirconia Ceramic	Zirconia Ceramic
Cable Diameter	2.0 mm	2.0 mm	2.0 mm	2.0 mm
Cable Jacket Material	PVC	PVC	PVC	PVC
Flame Rating	OFNR	OFNR	OFNR	OFNR
Available Length	1–100 m	1–100 m	1–100 m	1–100 m

2、Optical Fiber Characteristics

Parameter	OS2 Single-Mode	OM3 Multimode	OM4 Multimode	OM5 Multimode
Core / Cladding Diameter	9/125 μm	50/125 μm	50/125 μm	50/125 μm

Operating Wavelength	1310 / 1550 nm	850 / 1300 nm	850 / 1300 nm	850 / 953 / 1300 nm
Maximum Attenuation	≤0.4 dB/km @1310 nm; ≤0.3 dB/km @1550 nm	≤3.5 dB/km @850 nm; ≤1.5 dB/km @1300 nm	≤3.5 dB/km @850 nm; ≤1.5 dB/km @1300 nm	≤2.3 dB/km @850 nm; ≤1.7 dB/km @953 nm; ≤0.6 dB/km @1300 nm
Minimum Effective Modal Bandwidth (EMB)		≥2000 MHz·km @850 nm	≥4700 MHz·km @850 nm	≥4700 MHz·km @850 nm; ≥2470 MHz·km @953 nm
Minimum Overfilled Launch (OFL) Bandwidth		≥1500 MHz·km @850 nm; ≥500 MHz·km @1300 nm	≥3500 MHz·km @850 nm; ≥500 MHz·km @1300 nm	≥3500 MHz·km @850 nm; ≥1850 MHz·km @953 nm; ≥500 MHz·km @1300 nm

3、Connector Optical Performance

Parameter	OS2 LC/UPC	OM3 LC/UPC	OM4 LC/UPC	OM5 LC/UPC
Maximum Insertion Loss (per Connector)	≤0.30 dB	≤0.30 dB	≤0.30 dB	≤0.30 dB
Minimum Return Loss	≥50 dB	≥30 dB	≥30 dB	≥30 dB

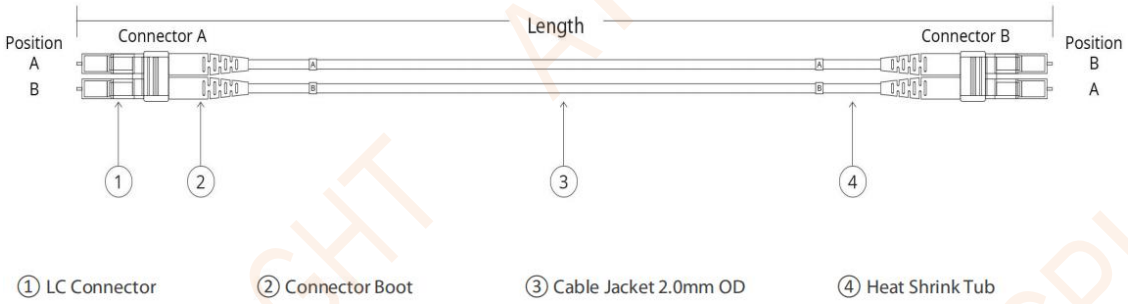
4、Physical and Mechanical Characteristics

Parameter	Specification
Cable Configuration	Duplex
Cable Construction	2.0 mm PVC Cable
Cable Outside Diameter	2.0 mm
Connector Type	LC Duplex
Connector Ferrule Material	Zirconia Ceramic
Minimum Bend Radius (Static)	20 mm
Minimum Bend Radius (Dynamic)	40 mm

5、Environmental Characteristics

Parameter	Specification
Cable Jacket Material	PVC
Flame Rating	OFNR (Riser)
Operating Temperature	-10°C to +70°C (14°F to 158°F)
Storage Temperature	-20°C to +70°C (-4°F to 158

Mechanical Dimension



① LC Connector ② Connector Boot ③ Cable Jacket 2.0mm OD ④ Heat Shrink Tub

Note:

Length tolerance: L ≤ 1 m: ±0.05 m; 1 m < L < 20 m: ±0.10 m; L ≥ 20 m: ±1% of the nominal length. Overall length is measured from the front mating face of Connector A to the front mating face of.

Handling and Safety Precautions:

- **Bend Radius:** Do not bend the cable below the specified minimum bend radius. Avoid sharp bends, tight loops, or excessive bending during installation and operation.
- **Cable Handling:** Avoid excessive pulling, twisting, crushing, stretching, or other mechanical stress that may damage the optical fibers or cable structure.
- **Installation and Removal:** Handle connectors by their housings. Do not pull directly on the cable or apply excessive force when mating or unmating connectors. Ensure proper connector key alignment before connection.
- **Connector Protection:** Keep connector endfaces clean and protected with dust caps when not in use. Avoid touching the fiber endfaces or exposing them to dust, oil, moisture, or other contaminants.
- **Cleaning and Inspection:** Inspect and clean connector endfaces using appropriate fiber optic cleaning tools before mating. Always verify connector cleanliness to minimize insertion loss and prevent endface damage.
- **Optical Safety:** Never look directly into fiber connector endfaces or exposed optical fibers, especially when connected to active optical equipment. Invisible laser radiation may be present and can cause eye injury

Ordering Information

PN	Description
S2-2F-LCU-LCU	LC/UPC Duplex to LC/UPC Duplex OS2 Single-Mode Fiber Optic Patch Cable, 2 Fibers, 2.0mm PVC Riser (OFNR)
M5-2F-LCU-LCU	LC/UPC Duplex to LC/UPC Duplex OM5 Multimode Fiber Optic Patch Cable, 2 Fibers, 2.0mm PVC Riser (OFNR)
M4-2F-LCU-LCU	LC/UPC Duplex to LC/UPC Duplex OM4 Multimode Fiber Optic Patch Cable, 2 Fibers, 2.0mm PVC Riser (OFNR)
M3-2F-LCU-LCU	LC/UPC Duplex to LC/UPC Duplex OM3 Multimode Fiber Optic Patch Cable, 2 Fibers, 2.0mm PVC Riser (OFNR)

Note：

Standard lengths are available in 1 m, 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, and 50 m.

Custom lengths are available upon request. Non-standard lengths are generally not held in stock and are