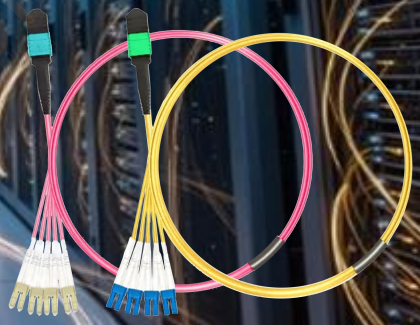
Product Specification

MTP-8 to Duplex LC Fiber Optic Harness Cables

OS2 Single-Mode / OM4 Multimode
8-Fiber | MTP-8 APC/UPC | 4× Duplex LC/UPC



Features

- US Conec MTP® connector
- SENKO MPO-PLUS® connector option
- Corning SMF-28® Ultra single-mode fiber
- Corning ClearCurve® OM4 multimode fiber
- 8-fiber MTP-to-4 × Duplex LC harness configuration
- Type B polarity
- Low-loss MTP connector performance
- Factory terminated and individually tested
- OFNP Plenum-rated cable jacket
- Optional pulling eye for connector protection during installation
- Custom staggered breakout leg lengths available

Compliance

- RoHS Compliant
- ANSI/TIA-568.3-E
- ANSI/TIA-604-5-F (FOCIS 5)
- IEC

Applications

- Data Center Fiber Interconnections
- AI and HPC Cluster Networks
- High-Speed Ethernet and InfiniBand Networks
- High-Density MTP-to-LC Connectivity

Description

AICPLIGHT MTP-8 to Duplex LC Fiber Optic Harness Cables are designed for high-density optical interconnections in data centers, AI computing clusters, and high-performance network environments.

Each harness converts one 8-fiber MTP interface into four Duplex LC/UPC connections, enabling efficient transition from parallel-optics infrastructure to duplex optical interfaces. The series is available in OS2 single-mode and OM4 multimode configurations with Type B polarity.

The OS2 version uses an MTP-8 APC female connector on the trunk side, while the OM4 version uses an MTP-8 UPC female connector. Both configurations terminate in four Duplex LC/UPC connectors and feature an OFNP Plenum-rated jacket.

Factory termination, low-loss connectors, and flexible breakout-leg options help simplify installation, improve cable management, and support high-density switch, server, patch-panel, and fiber-distribution connectivity.

Product Performance Specifications

1、Model Configuration

Parameter	S2-8FB-MTPA-8DLCU	M4-8FB-MTPU-8DLCU
Fiber Mode	Single-mode	Multimode
Fiber Type	OS2	OM4
Fiber Count	8 Fibers	8 Fibers
MTP Connector	MTP-8 Female	MTP-8 Female
MTP Polish	APC	UPC
LC Configuration	4 × Duplex LC	4 × Duplex LC
LC Polish	UPC	UPC
Polarity	Type B	Type B
Cable Jacket	OFNP	OFNP
Cable Color	Yellow	Magenta
Available Length	1–50 m	1–50 m

2、Optical Fiber Characteristics

Parameter	OS2 Single-Mode	OM4 Multimode
Core / Cladding Diameter	9/125 μm	50/125 μm
Operating Wavelength	1310 / 1550 nm	850 / 1300 nm

Maximum Attenuation	≤0.32 dB/km @1310 nm; ≤0.18 dB/km @1550 nm	≤2.3 dB/km @850 nm; ≤0.6 dB/km @1300 nm
Minimum Overfilled Launch Bandwidth		≥3500 MHz·km @850 nm; ≥500 MHz·km @1300 nm
Minimum Effective Modal Bandwidth		≥4700 MHz·km @850 nm
Minimum Bend Radius	10 mm	7.5 mm

3、MTP Connector Optical Performance

Parameter	OS2 APC	OM4 UPC
Maximum Insertion Loss	≤0.35 dB	≤0.35 dB
Minimum Return Loss	≥60 dB	≥20 dB
Connector Gender	Female	Female

4、LC Connector Optical Performance

Parameter	OS2 LC/UPC	OM4 LC/UPC
Maximum Insertion Loss	≤0.20 dB	≤0.20 dB
Minimum Return Loss	≥50 dB	≥30 dB
Connector Configuration	Duplex	Duplex

5、Color Characteristics

Parameter	OS2	OM4
Cable Jacket	Yellow	Magenta
MTP Housing	Green	Aqua
LC Housing	Blue	Aqua

6、Physical and Mechanical Characteristics

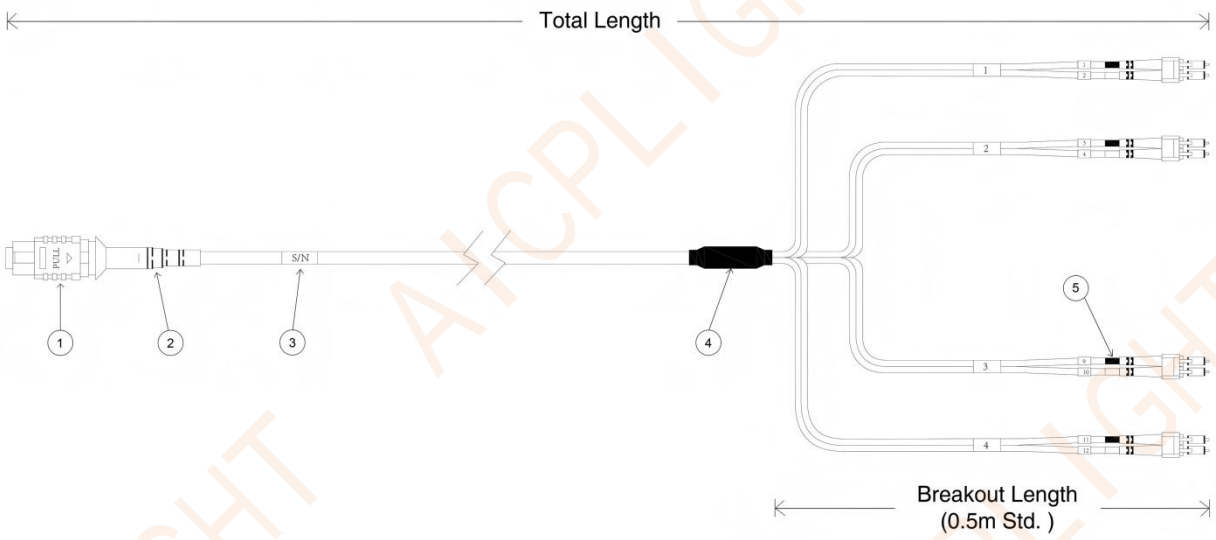
Parameter	Specification
Main Cable Diameter	3.0 mm
Breakout Leg Diameter	2.0 mm
Standard Breakout Length	0.3 m / 0.5 m

Breakout Configuration	4 × Duplex LC
Minimum Bend Radius	OS2: 10 mm; OM4: 7.5 mm
Pulling Eye	Optional
Breakout Leg Staggering	Customizable

7、Environmental Characteristics

Parameter	Specification
Cable Jacket Rating	OFNP (Plenum)
Operating Temperature	-10°C to +70°C (14°F to 158°F)
Storage Temperature	-40°C to +85°C (-40°F to 185°F)

Mechanical Dimension



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
S2-8FB-MTPA-8DLCU	MTP-8 APC Female to 4 × Duplex LC/UPC Connectors OS2 Single-Mode Fiber Optic Breakout Cable, 8 Fibers, Type B, Plenum (OFNP), Yellow
M4-8FB-MTPU-8DLCU	MTP-8 UPC Female to 4 × Duplex LC/UPC Connectors OM4 Multimode Fiber Optic Breakout Cable, 8 Fibers, Type B, Plenum (OFNP), Magenta

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