

Optical Fiber Adapter

TECHNICAL DATA SHEET

**SC Adapter MM-OM4-DX-UPC 2.5mm
MMF**



SC Adapter MM-OM4-DX-UPC 2.5mm MMF

Product Description:

The SC Adapter MM-OM4-DX-UPC 2.5 mm Multimode Fiber (MMF) is a high-performance duplex fiber optic adapter designed to connect two SC/UPC OM4 multimode fiber connectors with low insertion loss and reliable optical performance.



It features precision zirconia ceramic alignment sleeves that ensure accurate fiber core alignment and stable signal transmission. Optimized for OM4 laser-optimized multimode fiber systems, this adapter supports ultra-high-speed optical communication for data centers, cloud infrastructure, storage systems, and enterprise networks.

The duplex configuration supports simultaneous transmit and receive (Tx/Rx) communication, making it ideal for modern high-bandwidth networking applications including 10G, 40G, and 100G Ethernet systems.

Features:

- SC/UPC duplex OM4 multimode adapter
- Precision zirconia ceramic alignment sleeves
- Duplex configuration for simultaneous Tx/Rx communication
- Low insertion loss and stable optical performance
- Supports ultra-high-speed optical transmission
- Snap-in installation for patch panels and ODFs
- High durability and repeatability

Applications:

- Data centers and cloud infrastructure
- 10G / 40G / 100G Ethernet networks
- Storage Area Networks (SAN)
- Telecom and communication systems
- Fiber patch panels and ODF systems
- Enterprise structured cabling systems

Benefits:

- Ensures precise fiber core alignment
- Minimizes optical attenuation and signal loss
- Supports 10G / 40G / 100G high-speed networks
- Improves network reliability and transmission efficiency
- Easy installation and maintenance
- Suitable for high-density fiber environments
- Long operational lifespan with stable performance
- Ideal for data centers, SAN, and cloud infrastructure applications

Technical Specifications:

Parameter	Specification
Connector Type	SC Duplex (DX)
Fiber Type	Multimode OM4 (50/125 μm)
Ferrule Size	2.5 mm (SC Standard)
Polish Type	UPC (Ultra Physical Contact)
Insertion Loss	≤ 0.2 dB (Typical), ≤ 0.3 dB Max
Return Loss	≥ 35 dB
Alignment Sleeve	Zirconia Ceramic
Mating Durability	≥ 1000 Cycles
Repeatability	≤ 0.2 dB Variation
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Humidity	Up to 95%
Compliance Standards	IEC 61754-4, TIA/EIA 604-3
RoHS Compliance	Yes
Color	Violet (OM4 Identification)

Environmental Specifications:

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	Up to 95%
Flame Rating	UL94-V0 (Optional)
Vibration Resistance	Stable Optical Performance Under Vibration
Shock Resistance	High Mechanical Durability
Dust Protection	With Dust Caps
Corrosion Resistance	Resistant to Corrosion and Moisture
Indoor / Outdoor Use	Primarily Indoor Applications
RoHS Compliance	Yes