

Cisco GLC-SX-MMD=

1000BASE-SX SFP Multimode Short-Reach Optical Transceiver

DATASHEET

Product Overview: The Cisco GLC-SX-MMD= (Spare) is an industry-standard 1000BASE-SX Small Form-Factor Pluggable (SFP) optical transceiver designed for short-reach 1 Gigabit Ethernet links over multimode fiber (MMF). Operating at a nominal 850nm wavelength using a VCSEL laser, it supports link distances up to 550 meters on laser-optimized 50µm OM2/OM3 MMF and up to 1,000 meters on OM4 MMF. It includes Digital Optical Monitoring (DOM/DDM) and extended operating temperature range support (-5°C to 85°C) for enterprise networking environments.

1.25 Gbps

DATA LINE RATE

850 nm

VCSEL WAVELENGTH

Up to 1 km

MAX MMF REACH

< 1.0 W

MAX POWER DRAW

OPTICAL & TRANSMISSION SPECIFICATIONS

Parameter	Specification Details
Standard Compliance	IEEE 802.3z 1000BASE-SX, SFF-8472 Digital Diagnostic Interface Specification
Optics & Transmitter Type	850nm VCSEL (Vertical-Cavity Surface-Emitting Laser) Transmitter
Receiver Type	PIN Photodetector Receiver
Transmit Power (dBm)	Maximum: -3.0 dBm Minimum: -9.5 dBm
Receive Power (dBm)	Maximum (Receiver Overload): 0.0 dBm Minimum Sensitivity: -17.0 dBm
Optical Link Budget	7.5 dB (Supports up to 550 meters on OM2/OM3 MMF)
Wavelength Range	770 nm to 860 nm (850 nm center wavelength)

CABLE & DISTANCE MATRIX

Fiber Cable Type	Core Diameter (Microns)	Modal Bandwidth (MHz·km)	Max Transmission Distance
FDDI-grade MMF	62.5 µm	160 MHz·km	220 meters (722 ft)
OM1 MMF	62.5 µm	200 MHz·km	275 meters (902 ft)
OM2 MMF	50.0 µm	500 MHz·km	550 meters (1,804 ft)
OM3 MMF (Laser-Optimized)	50.0 µm	2000 MHz·km	550 meters (1,804 ft)
OM4 MMF (Laser-Optimized)	50.0 µm	4700 MHz·km	1,000 meters (3,281 ft)

PHYSICAL & POWER CHARACTERISTICS

Connector Interface	Duplex LC Female Connector
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KEY MODULE CAPABILITIES & ARCHITECTURE

Multimode Short-Reach Transmission

Optimized for intra-building risers, data center rack-to-rack links, and wiring closet aggregation over standard 50µm and 62.5µm multimode fiber cables.

Short-Reach MMFUp to 1 km

Digital Optical Monitoring (DOM)

Integrated DOM ("D" suffix) per SFF-8472 enables real-time diagnostic reporting for TX/RX optical power, laser bias current, temperature, and supply voltage.

DOM / DDM SFF-8472

Extended Operating Temperature

Engineered with "EXT" extended operating temperature tolerance (-5°C to 85°C), ensuring robust operation in challenging, non-climate-controlled spaces.

-5°C to 85°C EXTIndustrial-Grade

Hot-Swappable SFP Architecture

Allows insertion and removal from SFP ports on live Cisco switches and routers without powering down equipment or interrupting adjacent port traffic.

Hot-SwappablePlug & Play

REGULATORY & SAFETY COMPLIANCE

Category	Standards & Certifications Supported
Laser Safety Class	Class 1 Laser Product compliant with FDA/CDRH and IEC 60825-1 / EN 60825-1
Environmental Standards	RoHS 6/6 compliant (lead-free), CE Mark, REACH compliant
EMC & Immunity	FCC Class B Part 15, EN 55022 Class B, EN 55024, CISPR 22 Class B, VCCI Class B
ESD & Electrical Safety	IEC/EN 61000-4-2 ESD protection, UL 60950-1, CSA C22.2 No. 60950-1

SUPPORTED PLATFORM FAMILIES & ORDERING INFORMATION

Part Number (PID)	Description & Platform Compatibility
GLC-SX-MMD=	Cisco 1000BASE-SX SFP Transceiver for MMF with DOM (Spare Unit)
GLC-SX-MMD	Cisco 1000BASE-SX SFP Transceiver for MMF with DOM (Standard PID)
GLC-SX-MM-RGD=	Cisco 1000BASE-SX SFP Transceiver, Industrial Ruggedized (-40°C to 85°C)
Supported Switches	Cisco Catalyst 2960/3560/3750/3850/9200/9300/9400/9500, Industrial Ethernet IE2000/IE4000
Supported Routers	Cisco ASR 900/1000/9000, ISR 1000/4000, Firepower 1000/2100/4100 Series

Warranty & Service: The Cisco GLC-SX-MMD= includes Cisco's standard 90-day limited hardware warranty. Extended technical support and advance hardware replacement options are provided under active Cisco SMARTnet contracts on the host switch or router.