

Cisco SFP-25G-SR-S=

25GBASE-SR SFP28 Multimode Optical Transceiver Module (S-Class)

DATASHEET

Product Overview: The Cisco SFP-25G-SR-S= (Spare Unit) is an S-Class 25GBASE-SR SFP28 optical transceiver designed for high-density 25 Gigabit Ethernet data center and enterprise networking connections over multimode fiber (MMF). Operating at an 850nm nominal wavelength with an integrated VCSEL transmitter and built-in dual CDR, it supports link distances up to 70 meters on OM3 MMF and up to 100 meters on OM4 MMF. It requires Reed-Solomon Forward Error Correction (RS-FEC) on host ports and features Digital Optical Monitoring (DOM/DDM).

25.78 Gbps

DATA LINE RATE

850 nm

VCSEL WAVELENGTH

100 m

MAX REACH (OM4 MMF)

1.2 W

MAX POWER DRAW

OPTICAL & TRANSMISSION SPECIFICATIONS

Parameter	Specification Details
Standard Compliance	IEEE 802.3by 25GBASE-SR, SFF-8402, SFF-8431, SFF-8432, SFF-8472
Optics & Transmitter Type	850nm VCSEL (Vertical-Cavity Surface-Emitting Laser) with dual internal CDR
Receiver Type	PIN Photodetector Receiver
Transmit Power (dBm)	Maximum: +2.4 dBm Minimum: -8.4 dBm
Receive Power (dBm)	Maximum (Receiver Overload): +2.4 dBm Minimum Sensitivity (OMA): -8.4 dBm
Required Host FEC	Requires Reed-Solomon Forward Error Correction (RS-FEC IEEE 802.3by / IEEE 802.3bj)
Wavelength Range	840 nm to 860 nm (850 nm center wavelength)

CABLE & DISTANCE MATRIX

Fiber Cable Type	Core Diameter (Microns)	Modal Bandwidth (MHz·km)	Max Transmission Distance
OM3 MMF (Laser-Optimized)	50.0 µm	2000 MHz·km	70 meters (230 ft)
OM4 MMF (Laser-Optimized)	50.0 µm	4700 MHz·km	100 meters (328 ft)

PHYSICAL & POWER CHARACTERISTICS

Connector Interface	Duplex LC Female Connector
Form Factor & Latch	Hot-pluggable SFP28 Footprint with Beige/Beige-Gray Pull-Tab Latch
Power Consumption	Power dissipation < 1.2 Watts (Supply Voltage: 3.3V DC)

KEY MODULE CAPABILITIES & ARCHITECTURE

25G High-Density Data Center Connectivity

Designed for intra-rack top-of-rack (ToR) switch links, server network adapters (NICs), and storage arrays requiring low-latency 25GbE backhaul over short MMF spans.

25GbE SFP28

Data Center ToR

Digital Optical Monitoring (DOM)

Real-time optical diagnostic monitoring per SFF-8472 allows network operators to inspect optical output power, receiver input power, temperature, voltage, and laser bias current.

DOM / DDM

SFF-8472

Cisco S-Class Smart Architecture

Cisco S-Class optical modules are optimized for enterprise and data center Ethernet applications, providing an ideal cost-to-performance ratio without sacrificing reliability.

S-Class Series

Cisco Certified

Hot-Swappable SFP28 Footprint

Enables hot-pluggable installation and removal from SFP28 interface ports on live Cisco switches and routers without causing system downtime or port resets.

Hot-Swappable

Zero Outage

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
SFP-25G-SR-S=	Cisco 25GBASE-SR SFP28 Transceiver for MMF, S-Class (Spare Unit)
SFP-25G-SR-S	Cisco 25GBASE-SR SFP28 Transceiver for MMF, S-Class (Standard Production PID)
SFP-10/25G-CSR-S=	Cisco 10/25GBASE-CSR SFP28 Transceiver (Extended Reach up to 300m/400m)
Supported Switches	Cisco Catalyst 9300/9400/9500/9600, Nexus 3000/9000 Data Center Series
Supported Routers & Servers	Cisco ASR 1000/9000, NCS 5500 Series, Cisco UCS C-Series/B-Series Servers

Warranty & Service: The Cisco SFP-25G-SR-S= 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.