

Cisco SFP-10G-LR=

10GBASE-LR SFP+ Single-Mode Long-Reach Optical Transceiver

DATASHEET

Product Overview: The Cisco SFP-10G-LR= (Spare) is a high-performance 10GBASE-LR SFP+ optical transceiver designed for long-distance 10 Gigabit Ethernet connectivity over single-mode fiber (SMF). Operating at a nominal wavelength of 1310nm using a Distributed Feedback (DFB) laser, it supports transmission distances of up to 10 kilometers (6.2 miles) on standard OS1/OS2 SMF. It features Digital Optical Monitoring (DOM/DDM), hot-swappable installation, and full compliance with SFF-8431, SFF-8432, and IEEE 802.3ae standards.

10.3 Gbps

DATA LINE RATE

1310 nm

DFB WAVELENGTH

10 km

REACH (OS1/OS2 SMF)

1.2 W

MAX POWER DRAW

OPTICAL & TRANSMISSION SPECIFICATIONS

Parameter	Specification Details
Standard Compliance	IEEE 802.3ae 10GBASE-LR, 10GBASE-LW, SFF-8431, SFF-8432, SFF-8472
Optics & Transmitter Type	1310nm DFB (Distributed Feedback) Laser Transmitter
Receiver Type	PIN Photodetector
Transmit Power (dBm)	Maximum: -1.0 dBm Minimum: -8.2 dBm
Receive Power (dBm)	Maximum (Receiver Overload): +0.5 dBm Minimum Sensitivity: -14.4 dBm
Optical Link Budget	6.2 dB (Supports up to 10 km on G.652 SMF)
Wavelength Range	1260 nm to 1355 nm (1310 nm nominal center wavelength)

CABLE & LINK PERFORMANCE MATRIX

Fiber Cable Type	Core / Cladding Diameter	Operating Wavelength	Max Transmission Distance
Standard SMF (G.652 / OS1)	9.0 µm / 125 µm	1310 nm	10 kilometers (6.2 miles)
Low Attenuation SMF (OS2)	9.0 µm / 125 µm	1310 nm	10 kilometers (6.2 miles)

PHYSICAL & POWER CHARACTERISTICS

Connector Interface	Duplex LC Female Connector
Form Factor & Latch	Hot-pluggable SFP+ Footprint with Blue Bail Latch Color Code
Power Consumption	Power dissipation < 1.2 Watts (Supply Voltage: 3.3V)
Dimensions & Weight	13.5 mm × 56.5 mm × 8.5 mm (0.53" × 2.22" × 0.33") Weight: 75 g (0.16 lbs)

KEY MODULE CAPABILITIES & ARCHITECTURE

Hot-Swappable SFP+ Architecture

Designed for live insertion and removal from SFP+ slots without impacting operational service or triggering system reboots on host platforms.

Hot-SwappableZero Outage

Digital Optical Monitoring (DOM)

Real-time optical diagnostic monitoring per SFF-8472, providing exact metrics for TX/RX power levels, laser bias current, temperature, and voltage.

DOM / DDM SFF-8472

Cisco Quality Identification (ID)

Includes embedded Cisco Quality ID software feature, enabling Cisco switches and routers to automatically identify genuine, certified hardware.

Cisco QualifiedAuto-Detect

Cross-Platform Interoperability

Interoperable on the same optical span with legacy 10GBASE-LR XENPAK, X2, and XFP modules over standard single-mode optical fiber.

XENPAK InteropXFP Interop

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-10G-LR=	Cisco 10GBASE-LR SFP+ Transceiver Module for SMF (Spare Unit)
SFP-10G-LR	Cisco 10GBASE-LR SFP+ Transceiver Module for SMF (Standard Production PID)
SFP-10G-LR-S=	Cisco 10GBASE-LR SFP+ Transceiver Module, S-Class (Enterprise Class Spare)
SFP-10G-LR-I=	Cisco 10GBASE-LR SFP+ Transceiver Module, Industrial Temp (-40°C to 85°C)
Supported Switches & Routers	Cisco Catalyst 3850/9200/9300/9400/9500/9600, Nexus 3000/5000/7000/9000, ASR 1000/9000, ISR 4000

Warranty & Service: The Cisco SFP-10G-LR= comes with Cisco's standard 90-day limited hardware warranty. Extended technical support and expedited replacement options are available through active Cisco SMARTnet service contracts on the host switch or router.