

Cisco QSFP-40G-LR4 Datasheet

40GBASE-LR4 QSFP+ Transceiver Module for Single-Mode Fiber (10km, LC Duplex, CWDM)

Product Overview

The **Cisco QSFP-40G-LR4=** is a 40GBASE-LR4 QSFP+ optical transceiver module designed for long-reach 40 Gigabit Ethernet links over standard Single-Mode Fiber (SMF). It multiplexes four independent CWDM lanes (1271nm, 1291nm, 1311nm, 1331nm) over standard LC duplex SMF to support transmission distances up to **10 kilometers**. It is ideal for data center interconnects (DCI), core routing, and enterprise backbone networks.

Key Features & Benefits

- **High-Bandwidth Multiplexing:** Combines 4x 10.3 Gbps CWDM wavelengths into a single 40 GbE optical link.
- **Extended Reach:** Up to 10 km transmission over standard Single-Mode Fiber (G.652 SMF).
- **Standard Fiber Interface:** Utilizes industry-standard LC duplex connectors for seamless fiber patch cord integration.
- **Digital Optical Monitoring (DOM):** Real-time parameter tracking (TX/RX power, operating temperature, supply voltage).
- **Hot-Swappable Form Factor:** Allows easy insertion and removal without interrupting network traffic.
- **Standards Compliance:** Fully compliant with IEEE 802.3ba 40GBASE-LR4 and SFF-8436 specifications.

Technical Specifications

Parameter	Specification / Value
Product Name	Cisco 40GBASE-LR4 QSFP+ Transceiver Module
Part Number (PID)	QSFP-40G-LR4=
Form Factor	QSFP+ (Hot-swappable)
Wavelengths (CWDM)	1271 nm, 1291 nm, 1311 nm, 1331 nm
Cable Type	Single-Mode Fiber (SMF)
Max Distance	10 km (6.2 miles)
Connector Type	Duplex LC
Data Rate	41.25 Gbps (4 x 10.3125 Gbps lanes)
Transmit Power (TX)	-7.0 dBm to +2.3 dBm (per lane)
Receiver Sensitivity (RX)	-11.5 dBm (OMA, per lane)
Power Consumption	< 3.5 Watts
Operating Temp Range	Commercial: 0°C to 70°C (32°F to 158°F)
Storage Temp Range	-40°C to 85°C (-40°F to 185°F)
Digital Diagnostics (DOM)	Supported (SFF-8636 / SFF-8436 compliant)

Platform Compatibility & Standards

The Cisco QSFP-40G-LR4 transceiver is supported across a broad range of Cisco enterprise and data center switches, including the **Cisco Nexus 3000 / 5000 / 7000 / 9000 Series**, **Catalyst 9500 / 9600 Series**, and **ASR 9000 Series Routers**.

Compliance Standards: IEEE 802.3ba (40GBASE-LR4), SFF-8436, SFF-8636, RoHS-6 compliant, Laser Class 1M (IEC 60825-1).