

What is the wavelength of a 40G optical module

Article Overview

40G QSFP+ SR4 modules use 850 nm, while 40G LR4 modules use four CWDM wavelengths: 1271 nm, 1291 nm, 1311 nm, and 1331 nm.

40G QSFP+ SR4 (Short-Reach) Modules

The 40GBASE-SR4 QSFP+ module is designed for short-distance transmission over multimode fiber (MMF). It uses four parallel lanes, each transmitting at a center wavelength of 850 nm. The module supports link lengths of 100 m on OM3 fiber and 150 m on OM4/OM5 fiber. It employs an MPO/MTP 12-fiber connector and is aligned with IEEE 40GBASE-SR4 specifications for high-bandwidth 40G optical links over parallel fiber lanes. SR4 modules are optimized for 40 GbE interfaces and support digital diagnostics monitoring (DDM) for operational parameters (temperature, optical power, etc.), .

40G QSFP+ LR4 (Long-Reach) Modules

The 40GBASE-LR4 QSFP+ module is intended for long-distance transmission up to 10 km over single-mode fiber (SMF). It uses four CWDM (Coarse Wavelength Division Multiplexing) channels, with central wavelengths of 1271 nm, 1291 nm, 1311 nm, and 1331 nm. Each lane carries 10 Gbps, which are multiplexed into a single 40 Gbps optical signal. The module uses duplex LC connectors and is compliant with IEEE 40GBASE-LR4 standards, enabling interoperability across compliant switches and platforms. CWDM technology allows long-distance deployment without increasing fi...

Article Content

May 31, 2026

What 40G QSFP+ Optical Module, DAC, AOC is Best

The 40G network connection technology solution includes 40G QSFP+ series optical

Jan 19, 2026

40 Gbit/s QSFP+ Optical Modules

The 40 Gbit/s QSFP+ optical modules can only be used with 40 GE interfaces. The wavelength of these 40 Gbit/s QSFP+ optical

Sep 01, 2025

What Is SWDM4 and 40G SWDM4 Transceiver?

Each wavelength carries a 10Gbps signal, resulting in a total aggregated bandwidth of 40Gbps. The 40G SWDM4

Aug 31, 2025

Introduction to Optical Fibers, dB, Attenuation and Measurements

This document is a quick reference to some of the formulas and important information related to optical technologies.

Dec 03, 2025

40G QSFP Modules-Optical Transceivers

The QSFP+ optical module is specifically designed for 40GBASE Ethernet, supporting a throughput of up to 10km over single-mode

Oct 02, 2025

Cisco 40GBASE QSFP Modules Data Sheet

Each Cisco QSFP 40-Gbps BiDi transceiver consists of two 20-Gbps transmit and receive channels in the 832-918

Jul 07, 2026

Unveiling the Cisco QSFP-40G-SR4-S: A Comprehensive Guide to

Explore the Cisco QSFP-40G-SR4-S, a powerful optical transceiver module that delivers 40GBASE-SR4 connectivity

May 21, 2026

40GBase-LR4 Spec Sheet

The central wavelengths of the 4 CWDM channels are 1271, 1291, 1311 and 1331 nm as members of the CWDM wavelength grid

Oct 21, 2025

Everything You Should Know About QSFP-40G-SR4 Optical

These modules are compatible with current network setups, emphasising reliable parallel transmission through VCSEL tech and

Feb 03, 2026

40G QSFP+ Module

Starview 40G QSFP+ modules, supporting 4 x 10Gbps transmission. Our Quad Small Form Pluggable Plus (QSFP+) transceiver

Mar 18, 2026

QSFP-40G-LR4: QSFP+ 40G LR4 Optical Module Single-Mode

Explore the QSFP-40G-LR4 a 40G LR4 single-mode module with CWDM for 10Km extension. Cisco compatible - buy now for high

Apr 08, 2026

QSFP 40G LR4 Transceiver: 10km Single-Mode Optical Solution

What Is a QSFP 40G LR4 Transceiver? A QSFP 40G LR4 transceiver is a 40Gbps optical module designed for up to 10km

Apr 19, 2026

In-Depth Guide to 40G QSFP+ Optical Modules, DAC, AOC

40G optical modules are increasingly widely used in data centers. 40G optical modules can reach up to 40Gbps to help data centers

May 02, 2026

FAQ Of 40G Wiring And Optical Module

Question: Can 40G-LR4 optical modules be split into 4x10G connections? Answer: No, 40G-LR4 module can not be divided into

Oct 06, 2025

What Is 40G QSFP+ LR4? A Complete Guide

Learn what 40G QSFP+ LR4 is, how it works, its key features, applications, and why it remains a reliable long-reach

Nov 17, 2025

40G QSFP+ SR4 VS 40G QSFP+ LR4 Optical Module -ETU-LINK

The wavelength of the 40G QSFP+ SR4 optical module is 4x850nm, while the 40G QSFP+ LR4 optical module adopts

Aug 02, 2025

40G QSFP+ Cable and Transceiver Modules Data Sheet | FS

The QSFP-LR4-40G Optical Transceiver Module is designed for use in 40Gb/s FDR10 InfiniBand systems throughput

Mar 28, 2026

Optical Transceiver Module Wholesale,10g/25g/40g/100g SFP+ Optical ...

Fiber optic module manufacturer,ETU-Link supply full model optical transceivers,including standard 8g/10g/25g/40g/100g sfp+ optical

Aug 13, 2025

QSFP+ 40G LR4 Explained: Your Ultimate Guide to 40G Long-Reach

Instead of using four separate fiber strands, it combines four independent 10G data streams, each carried on a

Aug 20, 2025

QSFP 40G LR4 Transceiver: 10km Single-Mode Optical Solution

QSFP 40G LR4 delivers 40Gbps transmission over single-mode fiber up to 10km using four CWDM4 wavelengths around 1310nm.

Jul 15, 2026

Detailed description of the types of 40G optical modules for ...

Typically, 40G optical modules with a wavelength of 850nm are used with multimode fiber optic patch cords for short

Aug 17, 2025

40G QSFP+ Optical Modules: A Complete Guide to Choosing for Data

40G QSFP+ SR-BD vs. LR4-S:Complete Guide for Data Center Upgrades While 100G and 400G technologies

Dec 08, 2025

What is a 40G Optical transceiver? What Are the Characteristics?

The 40G BASE-SR4 optical transceiver adopts MTP/MPO interface, and the working wavelength is 850nm, which is generally used

Dec 03, 2025

40Gb/s QSFP+ SMF Optical Transceiver

The transceiver operates over single mode fiber, using a nominal wavelength of 1310nm, and is SFF-8636 compliant. Rigorous

Jun 21, 2026

What Is an Optical Module and Its FAQs (V200)

What Is an Optical Module and Its FAQs (V200) Describes what an optical module is and FAQs, including the fundamentals,

Aug 10, 2025

Data Center 40G and 100G Multimode Fiber Connectivity

40G and 100G Transmission and Connectivity Methods Parallel Optics When the Ethernet Standards 802.3ba task group first

Oct 31, 2025

400G Optical Modules Explained: SR4 Vs. DR4 Vs. FR4 Vs. LR4

Key differences between SR4, DR4, FR4, and LR4 400G optical modules. Expert advice from Asterfusion engineers

Jan 02, 2026

Wavelength of a 40g optical module

Each wavelength carries 10Gbps, combining to deliver a total of 40Gbps bandwidth using 1270nm to 1330nm wavelengths.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg,
2196, South Africa

This document is for informational purposes only. Specifications subject to
change without notice.

