

40G QSFP+ ER4 40km

40G Eth, QSFP+, CWDM, ER4, 40km, LC, 1310nm, SM

CPQ-10E-ER-CDF02

OVERVIEW

The CPQ-10E-ER-CDF02 is a single mode QSFP+ transceiver designed for 40 Gigabit Ethernet and 40G Fiber Channel applications. The module uses four CWDM lanes for both transmit and receive functions. Each lane operates with a 1310nm DFB laser and a PIN photodiode receiver which provides full duplex transmission of up to 11.3Gbps per lane for a combined 40Gbps link.

The transceiver supports transmission distances up to 40km and complies with the QSFP+ Multi-Source Agreement and the SFF-8472 Digital Diagnostics Monitoring standard. The diagnostics interface provides real time monitoring of temperature, supply voltage, transmit power, receive power and bias current.

The device operates from a single 3.3V supply and is offered in Commercial (0°C to +70°C) operating temperature version. It is suitable for 40GBASE-ER4 networks, long reach optical backbones and carrier grade deployments.

KEY SPECIFICATIONS

- QSFP+ transceiver with LC connector
- Typical reach 40km over a single-mode fiber
- Support for 40G Ethernet (40GBASE-ER4) and OTU3
- Four CWDM lanes at 1271nm, 1291nm, 1311nm and 1331nm
- Less than 3.5W power consumption
- C-temp operating conditions - 0°C to +70°C

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	QSFP+	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	-2.7 to +4.5dBm ³⁾
Typical Reach	40km	Tx Wavelength	1264.5-1277.5nm 1284.5-1297.5nm 1304.5-1317.5nm 1324.5-1337.5nm
Nominal Wavelength	1271/1291/1311/1331nm	Extinction Ratio	≥ 5.5dB
Data Rate Support	10.3125 / 11.3 Gbps ¹⁾ 40 Gbps ²⁾	Receiver Data:	
Protocol Support	40 GbE	Rx Sensitivity	-18dBm ³⁾
Power Consumption	<3.5W	Rx Overload, max	-6dBm
Operating Temperature	0°C to 70°C	Rx Wavelength	1264.5 - 1277.5nm 1284.5 - 1297.5nm 1304.5 - 1317.5nm 1324.5 - 1337.5nm
Storage Temperature	-40°C to 85°C	LOS Assert	-35dBm
DDM	Yes	LOS De-assert	-23dBm
		LOS Hysteresis	0.5dB

¹⁾ Line rate per 10.31Gbps lane

²⁾ Aggregated data rate 40GbE

³⁾ Average Power, per lane

Safety/Regulatory Compliance

- Class 1 laser safe
- RoHS Compliance

ABSOLUTE MAX RATING

Exceeding these limits can cause permanent damage to the transceiver

Parameter	Value	Parameter	Value
Supply Voltage	-0.5V to 4.5V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	-7dBm

ORDERING INFORMATION

Ordering Code	Description
CPQ-10E-ER-CDF02	40G QSFP+, CWDM, ER4, 40km, LC, 1310nm, SM, 0 to 70C

All information contained in this document is subject to change without prior notice at the sole discretion of CloudPhotonix. The company warrants the performance of its products solely in accordance with the current published specifications and applicable warranty terms. CloudPhotonix makes no other warranties, express or implied, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, or non-infringement of third-party rights. For the most current certification and compliance information, please contact CloudPhotonix directly.

CONTACT INFORMATION

Email: sales@cloudphotonix.com
Phone: +91-1203116709, +91-1203116718
CloudPhotonix India Pvt. Ltd.
Block A-51, Sector 67
Noida – 201301, Uttar Pradesh, India