

400G QSFP-DD SR8 100m

400G Eth, QSFP-DD, PAM4, SR8, 100m, MPO-16, 850nm, MM

CDD-8E8-SR-CDF02

OVERVIEW

The CDD-8E8-SR-CDF02 is a multimode QSFP-DD optical transceiver designed for 400 Gigabit Ethernet applications. It uses 850nm VCSEL transmitters and PIN photodiode receivers to support optical transmission distances up to 100m over OM4 multimode fiber.

The module supports 8 parallel optical channels, each operating at 26.56GBaud PAM4 signalling, and complies with QSFP-DD MSA and CMIS 4.0 specifications. It is designed for high-speed data transmission in data center and high-performance computing interconnects.

The transceiver provides digital diagnostics monitoring for parameters such as module temperature, supply voltage, transmit optical power, receive optical power, and VCSEL bias current.

The module operates from a single 3.3V power supply and is available in commercial operating temperature range (0°C to +70°C). It is suitable for short reach 400G SR8 links and data center applications.

KEY SPECIFICATIONS

- 8 independent parallel optical channels
- Each channel data rates up to 26.56GBaud with CDR
- Up to 100m link on OM4 multi-mode
- 850nm VCSEL/PD Array Technology
- Optical connectivity via industry standard MPO/MTP terminated fiber ribbon
- MPO-16 APC Optical Receptacle Type
- Monitors for VCSEL bias, transmitted, received power, module temperature, and module supply
- Case Operating Temperature: Commercial (0 to +70°C)
- Compliant with CMIS 4.0

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	QSFP-DD	Transmitter Data:	
Transmission Media	MM (MPO)	Tx Power	-6.5 to +4dBm ³⁾
Typical Reach	100m	Tx Amplitude, OMA	-4.5 to 3dBm
Nominal Wavelength	850nm	Tx Wavelength	840-860nm
Data Rate Support	400Gbps ¹⁾ 26.56GBd (PAM4) ²⁾	Extinction Ratio	≥ 3.0dB
Protocol Support	400GbE	Receiver Data:	
Power Consumption	<10W	Rx Sensitivity	-8.4dBm ^{3) 4)}
Operating Temperature	0°C to 70°C	Rx Sensitivity, OMA	-6.6dBm ³⁾
Storage Temperature	-40°C to 85°C	Rx Overload, max	+4dBm ^{3) 4)}
DDM	Yes	Rx Wavelength	840-860nm
		LOS Assert	-24.6dBm
		LOS De-assert	-7dBm
		LOS Hysteresis	0.5dB

¹⁾ Aggregated line rate 400GbE

³⁾ Line baud rate

³⁾ Average power per lane

⁴⁾ Per 26.56 GBd lane. Measured with PRBS 2³¹-1@ BER ≤ 2.4E-4

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 3.6V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	+4dBm per lane

ORDERING INFORMATION

Ordering Code	Description
CDD-8E8-SR-CDF02	400G QSFP-DD, PAM4, SR8, 100m, MPO-16, 850nm, MM, 0 to 70C

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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