

25G/10G SFP28 ER 40km

25G/10G Eth, SFP28, ER, 40km, LC, 1310nm, SM

CP-25E-ER-xDF02

OVERVIEW

The CP-25E-ER-CDF02 is a single mode SFP28 transceiver designed for 25 Gigabit Ethernet and 25G CPRI applications. It operates with a 1310nm DFB laser transmitter and an APD photodiode receiver and supports transmission distances up to 40km on standard single mode fiber.

The module supports data rates up to 25.78Gbps and is compliant with the SFP28 Multi-Source Agreement and the SFF-8472 Digital Diagnostics Monitoring standard. The diagnostics interface provides real time monitoring of temperature, supply voltage, transmit optical power, receive optical power and bias current.

The transceiver uses a single 3.3V power supply and is available in Commercial (0°C to +70°C) and Industrial(-40°C to +85°C) operating temperature ranges. This makes it suitable for metro networks, long reach optical links and 25GBASE-ER deployments.

KEY SPECIFICATIONS

- 25G SFP28 transceiver with duplex LC connector
- 1310nm DFB laser and APD receiver
- Support for 25G Ethernet (25GBASE-ER) and 10G WAN/LAN
- Up to 40km transmission distance over single mode fiber
- Power consumption less than 2W
- Compliant with SFP+ MSA and SFF-8472 with duplex LC receptacle
- Temp operating conditions: Commercial (0°C to +70°C) and Industrial(-40°C to +85°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	SFP28	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	0 to 6dBm ³⁾
Typical Reach	40km	Tx Wavelength	1270 -1330nm
Nominal Wavelength	1310nm	Extinction Ratio	≥3.5dB
Data Rate Support	25.78Gbps ¹⁾ , 9.95/10.31Gbps ²⁾	Receiver Data:	
Protocol Support	25GbE ¹⁾ , CPRI ¹⁾ , 10GbE ²⁾	Rx Sensitivity	-18dBm ^{3) 4)}
Power Consumption	<2W	Rx Overload, max	-6dBm ^{3) 4)}
Operating Temperature	0°C to 70°C/ -40°C to +85°C	Rx Wavelength	1260 -1600nm
Storage Temperature	-40°C to 85°C	LOS Assert	-35dBm
DDM	Yes	LOS De-assert	-19dBm
MSA Compliance	SFF-8402, SFF-8472, 25GBASE-ER	LOS Hysteresis	0.5dB

¹⁾ CDR enabled

²⁾ CDR disabled

³⁾ Average power

⁴⁾ @ 25.78Gbps, BER ≤5E-5, PRBS 2³¹-1

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	-6dBm

ORDERING INFORMATION

Ordering Code	Description
CP-25E-ER-CDF02	25G/10G SFP28, ER, 40km, LC, 1310nm, SM, 0 to 70C
CP-25E-ER-IDF02	25G/10G SFP28, ER, 40km, LC, 1310nm, SM, -40 to 85C

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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