

25G/10G SFP28 LR 10km

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

CP-25E-LR-xDF02

OVERVIEW

The CP-25E-LR-xDF02 is a single mode SFP28 transceiver designed for 25G Ethernet and 25G CPRI applications. It operates with a 1310nm DFB laser transmitter and a PIN photodiode receiver and supports transmission distances up to 10km on standard single mode fiber. With the Clock and Data Recovery (CDR) functionality disabled, the transceiver can also be used for 10GbE-LAN and 10GbE-WAN services.

The module supports data rates up to 25.78Gbps and complies with the SFP28 Multi-Source Agreement and the SFF-8472 Digital Diagnostics Monitoring specification. The diagnostics interface provides real time information on temperature, supply voltage, transmit optical power, receive optical power and laser bias current.

The transceiver operates from a single 3.3V power supply and is available in Commercial (0°C to +70°C) and Industrial (-40°C to +85°C) temperature versions. It is suitable for data center interconnects, 25GBASE-LR links and other long reach optical applications.

KEY SPECIFICATIONS

- 25G SFP28 transceiver with duplex LC connector
- 1310nm DFB transmitter and PIN photodiode receiver
- Support for 25G Ethernet (25GBASE-SR) and 10G WAN/LAN
- Up to 10km transmission distance over single mode fiber
- Power consumption less than 1.4W
- 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	-7 to +2dBm ³⁾
Typical Reach	10km	Tx Wavelength	1270 -1350nm
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	-13.3dBm ^{3) 4)}
Power Consumption	<1.4W	Rx Overload, max	2dBm ^{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	-30dBm
DDM	Yes	LOS De-assert	-15dBm
		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	2dBm

ORDERING INFORMATION

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

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