

25/10G SFP28 BiDi 40km

25/10G Eth, SFP28, BiDi, 40km, LC, 1270/1310nm, SM

CB-25E-40-xDyy02

OVERVIEW

The CB-25E-40-xD1202 and CB-25E-40-xD2102 are single fiber bidirectional SFP28 transceivers designed for 25G Ethernet, eCPRI and CPRI applications. The modules operate using complementary wavelength pairs over a single strand of single mode fiber. One variant transmits at 1270nm and receives at 1310nm, and the other transmits at 1310nm and receives at 1270nm. Both versions support a 25.78/10.31Gbps data rate and provide up to 40km optical reach.

The devices are compliant with the SFP28 Multi-Source Agreement and support Digital Diagnostics Monitoring in accordance with SFF-8472. The DDM interface provides real time monitoring of supply voltage, temperature, transmit optical power, receive optical power and bias current.

The modules operate from a single 3.3V supply and are available in Commercial (0°C to +70°C) and Industrial (-40°C to +85°C) temperature ranges.

KEY SPECIFICATIONS

- 25G BiDi SFP28 transceivers with single LC connector
- Two wavelength options:
 - 1270nm TX / 1310nm RX
 - 1310nm TX / 1270nm RX
- Support for 25/10G Ethernet and CPRI option 10 applications
- Up to 40km distance over SM fiber
- Less than 1.5W power consumption
- Temp operating conditions: Commercial (0°C to +70°C) and Industrial (-40°C to +85°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	BiDi SFP28	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	0 to +6dBm ³⁾
Typical Reach	40km	Tx Wavelength	1260-1280nm ¹⁾ 1300-1320nm ²⁾
Nominal Wavelength	Tx:1270nm Rx:1310nm ¹⁾ Tx:1310nm Rx:1270nm ²⁾	Extinction Ratio	≥ 3.5dB
Data Rate Support	25.78/10.31Gbps	Receiver Data:	
Protocol Support	25GbE, CPRI	Rx Sensitivity	-17.5dBm ^{3) 4)}
Power Consumption	<1.5W	Rx Overload, max	-6dBm ⁴⁾
Operating Temperature	0°C to 70°C / -40°C to 85°C	Rx Wavelength	1300-1320nm ¹⁾ 1260-1280nm ²⁾
Storage Temperature	-40°C to 85°C	LOS Assert	-35dBm
DDM	Yes	LOS De-assert	-19dBm
		LOS Hysteresis	0.5dB

¹⁾ CB-25E-40-xD1202 - Red-coloured latch

²⁾ CB-25E-40-xD2102- White-coloured latch

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	-0.3V to 4V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	-6dBm

ORDERING INFORMATION

Ordering Code	Description
CB-25E-40-CD1202	25/10G SFP28, BiDi, 40km, LC, 1270/1310nm, SM, 0 to 70C
CB-25E-40-ID1202	25/10G SFP28, BiDi, 40km, LC, 1270/1310nm, SM, -40 to 85C
CB-25E-40-CD2102	25/10G SFP28, BiDi, 40km, LC, 1310/1270nm, SM, 0 to 70C
CB-25E-40-ID2102	25/10G SFP28, BiDi, 40km, LC, 1310/1270nm, SM, -40 to 85C

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