

100G QSFP28 Single Lambda BiDi 2km CL100GQBDLR1-02-A

Product Features:

- Supports 100GBASE-LR1-02 BIDI
- Lane signaling rate 106.25Gb/s with PAM4
- Up to 2km transmission on SMF
- EML Laser and PIN receiver
- 4x25.78Gb/s with NRZ electrical interface (CAUI-4)
- High speed I/O electrical interface
- I2C interface with integrated Digital Diagnostic monitoring
- QSFP28 MSA package with simplex LC connector
- Single +3.3V power supply
- Maximum power consumption 4.5 W
- Operating case temperature: 0 to +70 °C
- Compliant to IEEE 802.3bm, 100G Lambda MSA
- Compliant to SFF-8636 & SFF-8679 standard
- Complies with EU Directive 2015/863/EU
- Application
- 100GBASE-LR1-02 BIDI

Functional Characteristics (Optical)

The following tables list the performance specifications for the various functional blocks of the integrated optical transceiver module.

Table 1 – Transmitter Optical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength	CW	1284.5	1291	1297.5	nm	
		1304.5	1311	1317.5	nm	
Average Launch Power	PTX	-0.2	-	6.6	dBm	1
Outer Optical Modulation Amplitude	OMA	2.8	-	6.8	dBm	TEDCQ < 1.4
		1.4 + TDECQ	-		dBm	1.4 ≤ TDECQ
Transmitter and dispersion eye closure for PAM4 (TDECQ) (max)	TDECQ	-	-	3.6	dBm	
Transmitter eye closure for PAM4 (TECQ) (max)	TECQ	-	-	3.4	dBm	
TDECQ - TECQ (max)	-	-	-	2.7	dB	
Average Output Power (Laser Turn off)	P0UT-OFF	-	-	-15	dBm	
Side Mode Suppression Ratio	SMSR	30	-	-	dB	
Extinction Ratio	ER	3.5	-	-	dB	



Table 2 – Receiver Optical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength	CW	1304.5	1311	1317.5	nm	
		1284.5	1291	1297.5	nm	
Damage threshold		7.6	-	-	dBm	2
Average Rx Power	PRx	-10	-	6.6	dBm	3
Receive power_OMAouter	POMA	-	-	6.8	dBm	
Receiver sensitivity _OMAouter	SEN _OMA	-	-	-7.6	dBm	TECQ≤1.44
		-	-	-9+TECQ	dBm	1.4≤TECQ≤3.6
Los Assert	LosA	-26	-	-	dBm	
Los De-Assert	LosDA	-	-	-11	dBm	
Los Hysteresis	LosH	0.5	-	-	dB	

Ordering Information

Table 3 - Ordering Information

Part No.	Data Rate	DDM	Wave	Fiber Type	Dist.	Temp.	Optical Interface
CL100GBDLR1-02-A	100Gbps	yes	1291nm	SMF	2km	0~70°C	BiDi LC
CL100GBDLR1-02-B	100Gbps	yes	1311nm	SMF	2km	0~70°C	BiDi LC

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