WTQP100-LR4-C1

100G QSFP28 Transceiver 1310nm SMF 10km LC



1. Product Overview

Features I Compliance
Supports 103.1Gbps aggregate bit rate
4x25Gbps electrical interface
4X25Gbps DFBLAN-WDM
transmitter and PIN/TIA receiver

Features

- 100G QSFP28 LR4 transceiver.
- Four-lane electrical interface and LAN-WDM optical transmitter.
- PIN/TIA receiver.
- Up to 10 km over single-mode fiber.
- Commercial case temperature: 0 to 70 °C.
- Maximum module power: 4 W.

Applications

2. Ordering Information

Package	Product part NO.	Description
QSFP28	WTQP100-LR4-C1	4X25Gbps,Single-mode fiber, 10Km, 0-70℃

3. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Storage Temperature	TS	-40		85	ºC	
Storage Ambient Relative Humidity	HA	0		85	%	
Case Operation Temperature	℃	0		70	ºC	

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Maximum Supply Voltage	VCC	-0.5		4.0	V	
Signal Input Voltage		-0.3		Vcc+0.3	V	
Receiver Damage Threshold		+5.5			dBm	

4. Optical Parameters

Parameter	Symbol	Min.	Typ.	Typ.	Max.	Unit	Remark
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter
Total Average Output Power	POUT				10.5	dBm	
Average Output Power, each lane		-4.3	-4.3		4.5	dBm	
Optical Modulation Amplitude (OMA), each lane		-1.3	-1.3		4.5	dBm	
Extinction Ratio	ER	4	4			dB	
Center Wavelength	λc	1294.53 1299.02 1303.54 1308.09	1294.53 1299.02 1303.54 1308.09	1295.56 1300.05 1304.58 1309.14	1296.59 1301.09 1305.63 1310.19	nm	
Spectral Width					1	nm	
Transmitter OFF Output Power	POff				-30	dBm	
Transmitter eye mask definition {X1,X2,X3,Y1,Y2,Y3}		{0.25,0.4,0.45,0.25,0.28,0.4}	{0.25,0.4,0.45,0.25,0.28,0.4}	{0.25,0.4,0.45,0.25,0.28,0.4}	{0.25,0.4,0.45,0.25,0.28,0.4}		Hit ratio 5x10-5
Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver
Input Optical Wavelength	λIN	1294.53 1299.02 1303.54 1308.09	1294.53 1299.02 1303.54 1308.09	1295.56 1300.05 1304.58 1309.14	1296.59 1301.09 1305.63 1310.19	nm	
Average receive power, each lane		-10.6	-10.6		4.5		BER = 10–12
Receive power, each lane (OMA)		-8.6	-8.6		4.5	dBm	BER = 10–12
Receiver Reflectance	Rfl				-26	dB	
Loss of Signal Assert	PA	-24	-24		-13.6	dBm	
Loss of Signal De-assert	PD				-11.6	dBm	
LOS Hysteresis	PD- PA	0.5	0.5		6	dB	

5. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Supply Voltage	VCC	3.135		3.465	V	
Supply Current	ICC			1.15	A	
Module total power	P			4	W	
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter

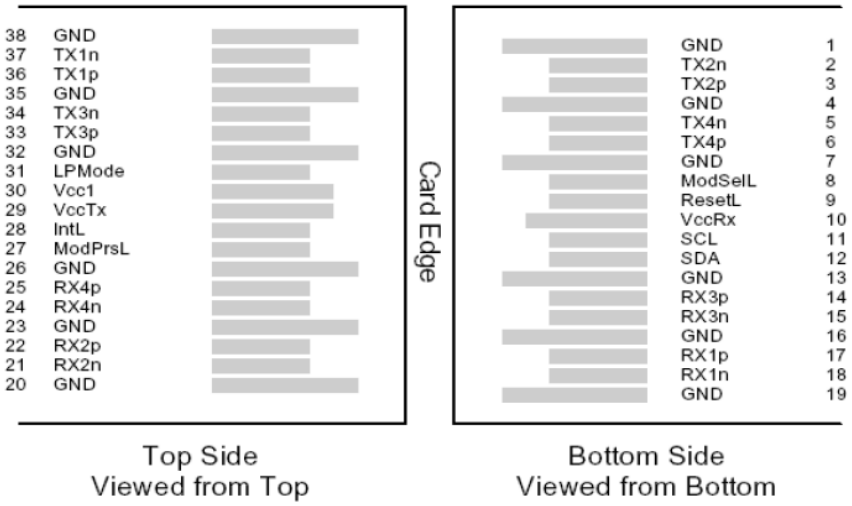
Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Signaling rate per lane		25.78125±100ppm	25.78125±100ppm	25.78125±100ppm	Gbps	
Differential pk-pk input voltage	Vin,pp,diff	350			mV	
Differential input Resistance	Rtin		100		Ohm	
Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver
Signaling rate per lane		25.78125±100ppm	25.78125±100ppm	25.78125±100ppm	Gbps	
Differential data output swing	Vout,pp		400		mVpp	
Eye width		0.57			UI	
Differential output Resistance			100		ohm	

6. Pin Descriptions

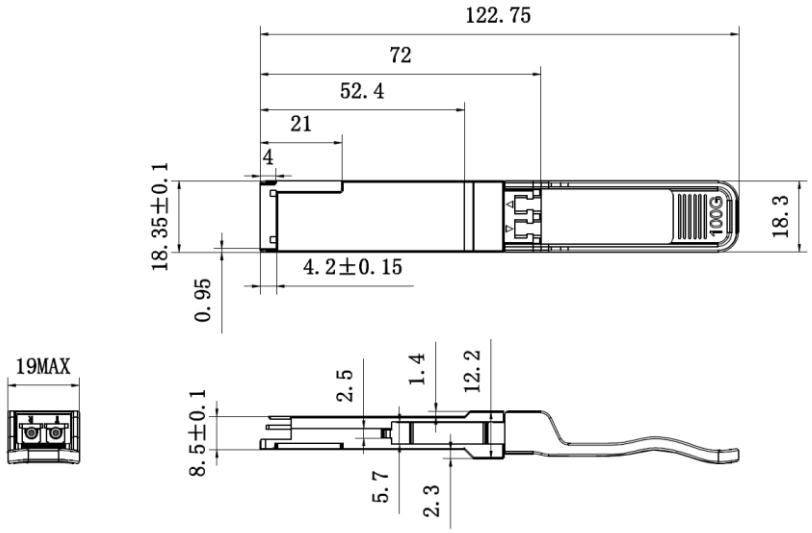
Pin	Symbol	Name/Description	Note
1	GND	Ground	1
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data Input	
4	GND	Ground	1
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data Input	
7	GND	Ground	1
8	ModSe1L	Module Select	
9	ResetL	Module Reset	
10	Vcc Rx	+3.3V Power supply receiver	
11	SCL	2-wire serial interface clock	
12	SDA	2-wire serial interface data	
13	GND	Ground	1
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	1
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	1
20	GND	Ground	1
21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	1

Pin	Symbol	Name/Description	Note
24	Rx4n	Receiver Inverted Data Output	
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	1
27	ModPrSL	Module Present	
28	IntL	Interrupt	
29	VccTx	+3.3V Power supply transmitter	
30	Vcc1	+3.3V Power Supply	
31	LPMode	Low Power Mode	
32	GND	Ground	1
33	Tx3p	Transmitter Non-Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Input	
35	GND	Ground	1
36	Tx1p	Transmitter Non-Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Input	
38	GND	Ground	1

7. Technical Figure 1



8. Technical Figure 2



9. Revision History

Version	Date	Description	Prepared by
V6	2025	Unified WincoTek datasheet format	WincoTek
V6.1	2026-10-23	Engineering and format review	WincoTek