



FEATURES:

- 4 Independent LAN-WDM channels
- Rate Adaptation, four-lane 25.78125G&10.3125G
- Low Power Consumption <4W
- Wide Operating Temperature(0°C~70°C)
- Maximum link length of 20km via Single Mode Fiber (SMF)

APPLICATIONS:

- 100GBASE LR4 100G Ethernet
- High performance computing, data com and sever data links
- High speed access

1-ABSOLUTE MAXIMUM RATING:

Parameter	Symbol	Conditions	Min.	Max.	Unit	Note
Storage Temperature	TStorage		-40	+85	°C	
Relative Humidity	RH		0	+85	%	

2-RECOMMENDED OPERATING CONDITIONS Exceeding the limits below may damage the transceiver permanently.

Parameter	Symbol	Cond.	Min.	Typ.	Max.	Unit
Case Temperature	TC		0		70	°C
Supply Voltage	VCC		3.135	3.3	3.465	V
Signaling Rate each Channel			25.78125		Gbps	
Supply Noise Rejection			---	---	100	mV
Receiver Differential Data Output			---		100	Ohm
Operating Distance	D		---	---	10	km

3-ELECTRICAL CHARACTERISTICS
(T=25°C, unless noted)

Parameter	Symbol	Cond.	Min.	Typ.	Max.	Unit
Power Consumption					4	W
Supply Current	Icc				1200	mA

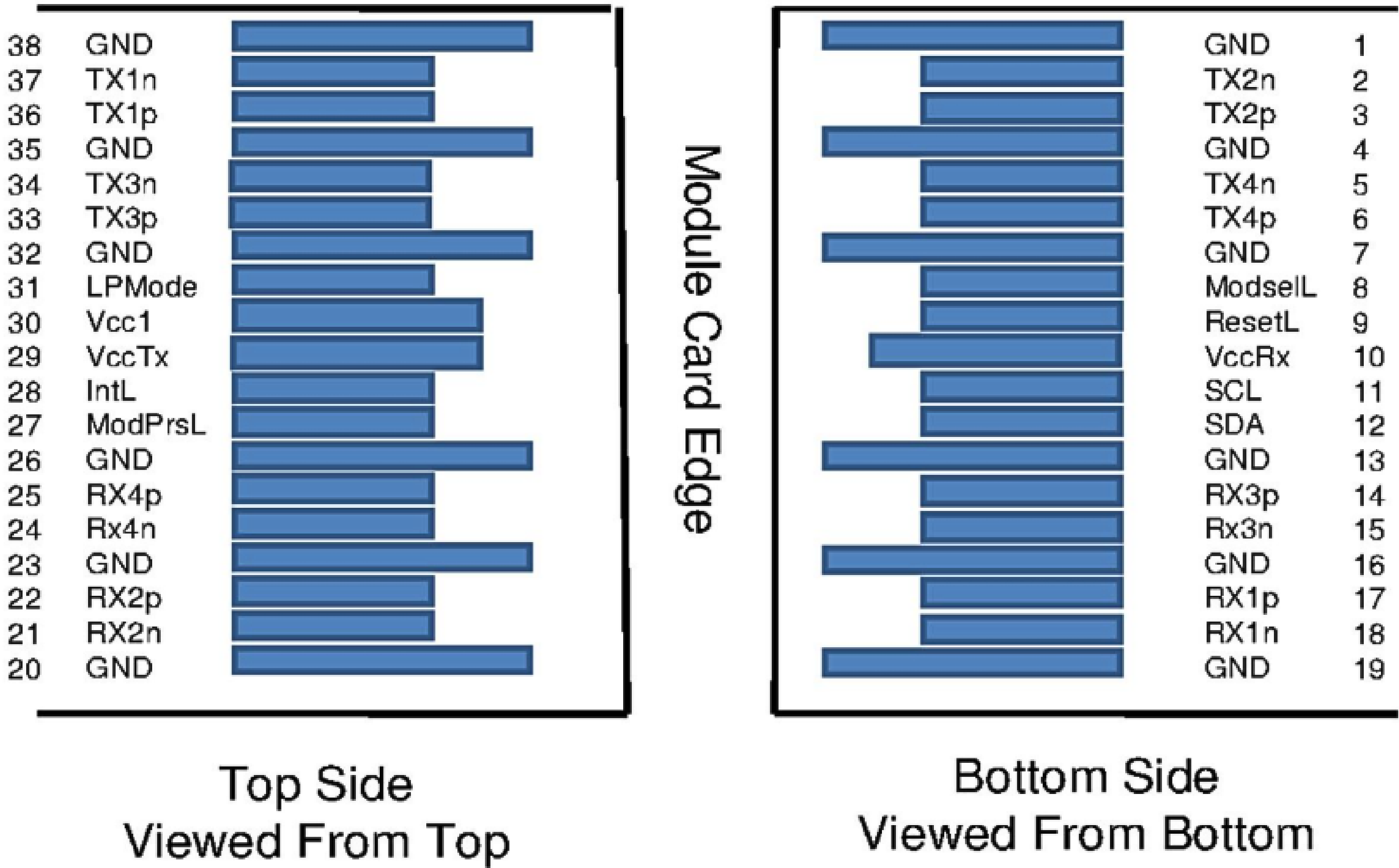
4-TRANSMITTER CHARACTERISTICS
(T=25°C, unless noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Signaling rate, each lane (range)	GBb			25.78125		GBb
Center Wavelength	λ0		1294.53		1296.59	nm
	λ1		1299.02		1301.09	nm
	λ2		1303.54		1305.63	nm
	λ3		1308.09		1310.19	nm
Side-mode suppression ratio	SMSR		30			dB
Total average launch power					10.5	dBm
Average launch power, each lane	Pf		-4.3		4.5	dBm
Optical Modulation Amplitude (OMA), each lane	TxOMA		-1.3		4.5	dBm
Transmitter and Dispersion Penalty	TDP				2.2	dB
Average launch power of OFF transmitter, each lane					-30	dBm
Extinction ratio	ER		4			dB
Optical return loss tolerance					20	dB
Transmitter reflectance					-12	dB

5-RECEIVER CHARACTERISTICS
(T=25°C, unless noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Signaling rate, each lane (range)	GBb			25.78125/10.3125		GBb
Center Wavelength	$\lambda 0$		1294.53		1296.59	nm
	$\lambda 1$		1299.02		1301.09	nm
	$\lambda 2$		1303.54		1305.63	nm
	$\lambda 3$		1308.09		1310.19	nm
Damage threshold			5.5			dBm
Average power at receiver input, each lane			-10.6		4.5	dBm
Receive power, each lane (OMA)					4.5	dBm
Return Loss	RL		-26			dB
Receiver sensitivity (OMA)	S _{OMA}	BER@10e-12			-8.6	dBm
LOS Assert	LOSD				-10.8	dBm
LOS De-Assert	LOSA		-24			dBm
LOS Hysteresis			0.5			dB

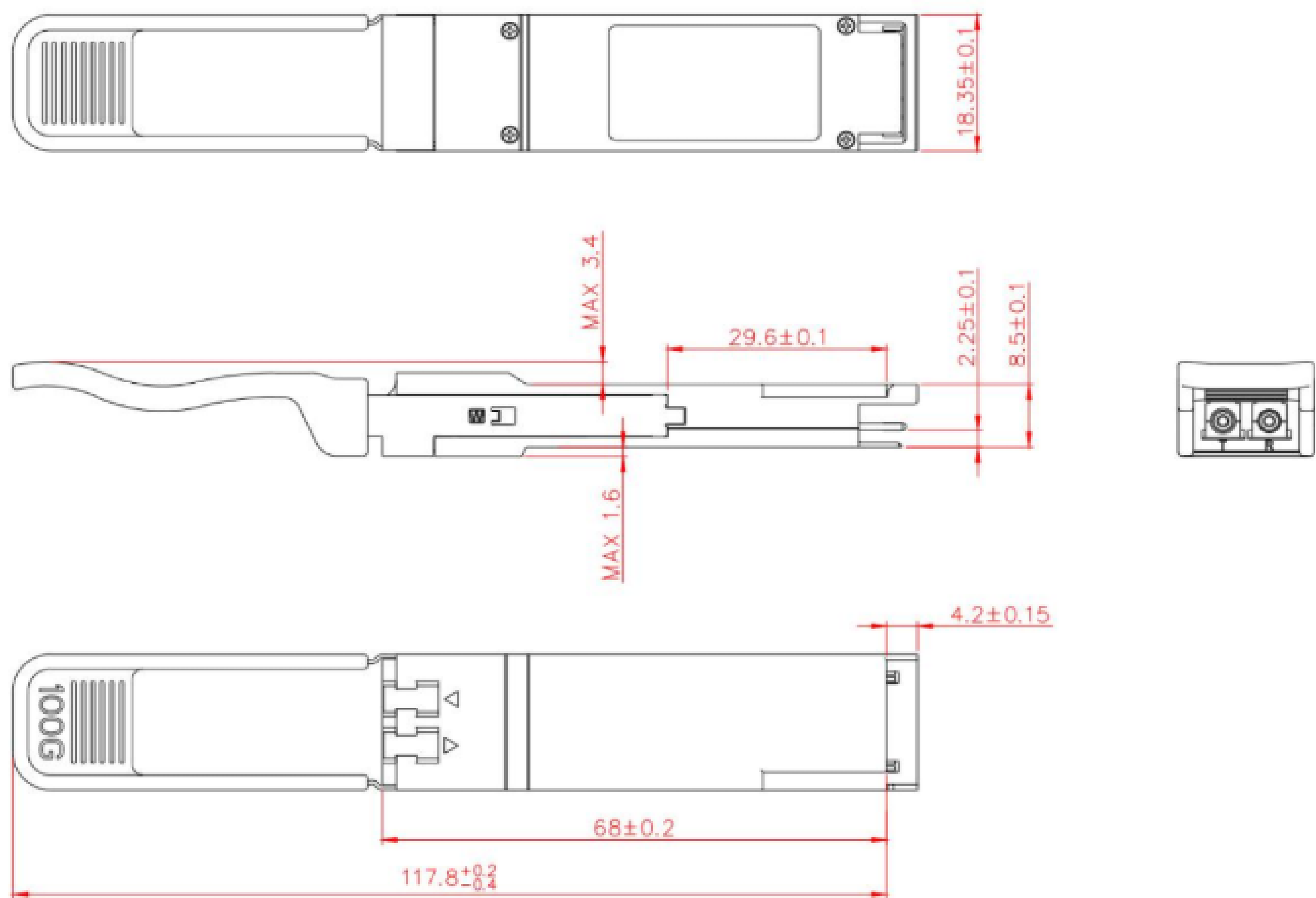
6-PIN ASSIGNMENT



7-PIN DESCRIPTIONS

PIN	Logic	Symbol	Name/Description	Note
1		GND	Ground	
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Ground	
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Ground	
8	LVTTL-I	ModSelL	Module Select	
9	LVTTL-I	ResetL	Module Reset	
10		VccRx	+ 3.3V Power Supply Receiver	
11	LVC MOS-I/ O	SCL	2-Wire Serial Interface Clock	
12	LVC MOS-I/ O	SDA	2-Wire Serial Interface Data	
13		GND	Ground	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	
20		GND	Ground	
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Ground	
24	CML-O	Rx4n	Receiver Inverted Data Output	
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	
30		Vcc1	+3.3 V Power Supply	
31	LVTTL-I	LPMODE	Low Power Mode	
32		GND	Ground	
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Ground	
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Ground	

8-OUTLINE DIMENSIONS



9-Digital Diagnostic Monitor Accuracy

The following characteristics are defined over recommended operating conditions

Parameter	Accuracy	Unit
Internally measured transceiver temperature	+/-3	deg.C
Internally measured transceiver supply voltage	+/-3	%
Measured Tx bias current	+/-10	%
Measured Tx output power	+/-3	dB
Measured Rx received average optical power	+/-3	dB