2 Gbps 1310nm Single-mode Dual Transmitter 2x5 Small Form Factor

Features

- Dual 1310nm FP LD SM Transmitter with LC Receptacle
- Small Form Factor 2 x 5 Pins
- Automatic Power Control Function
- Transmitter Disable Input
- AC Coupled and LVPECL Data Input
- Single 3.3V Power Supply

Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Data Rate (NRZ)	B	-	2	-	Gb/s
Optical Output Power (avg.) (1)	1	-8	-	-2	dBm
	2	0	-	5	
Extinction Ratio	ER	9			dB
Optical Wavelength	λ	1260	1310	1360	nm
Spectral Width	$\Delta\lambda$	-	1	2	nm
Output Rise Time (10-90%)	t_r	-	-	0.18	ns
Output Fall Time (10-90%)	t_f	-	-	0.18	ns
Data Input (4)	V_{IL} V_{IH}	V_{CC} -1.810 V_{CC} -1.165	- -	V_{CC} -1.475 V_{CC} -0.880	V V
Transmitter Disable Input	V_{DIL} V_{DIH}	0 2	- -	0.8 V_{CC}	V
Supply Voltage	V_{CC}	3.1	3.3	3.5	V
Supply Current	I_{CC}	-	-	110	mA

Note:

(1) With 0.275 NA, 9/125μm fiber.
(2) Driven with a differential signal.
(3) Transmitter eye mask diagram is compliant to FC-PI-2 Eye Diagram.
(4) 2^7 -1 PRBS, BER= 10^{-12}.
(5) Compatible LVPECL logic levels.
(6) The transmitter output should not be viewed directly.

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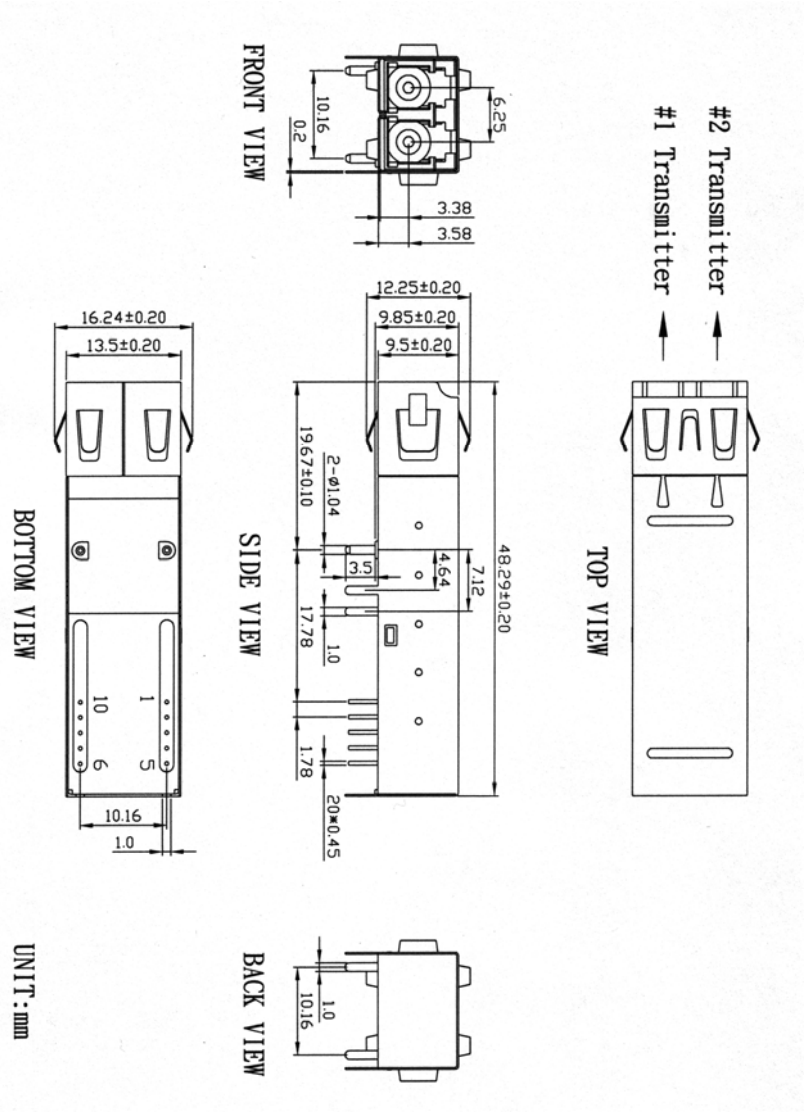
Absolute Maximum Ratings

Parameter		Min.	Max.	Unit
Operating Temperature	-1	-10	70	°C
	-2	-40	85	°C
Storage Temperature		-40	100	°C
Lead Soldering Limits		-	240/10	°C /sec
Supply Voltage		-0.2	4	V

Ordering Information

TD13SM4-1LLC3ARXF1G

Outline Drawing



Pinout Description

Pin No.	Pin Name	Description
1	#1 $\overline{TD}$	#1 Transmitter Data In(Inverted)
2	#1 TD	#1 Transmitter Data in
3	#1 TDis	#1 Transmitter Disable Input Logic Low Level to Switch Laser “ON” Input Logic High Level to Switch Laser “OFF”
4	#1 V_{EET}	#1 Transmitter Ground
5	#1 V_{CCT}	#1 Vcc Power Supply
6	#2 V_{CCT}	#2 Vcc Power Supply
7	#2 V_{EET}	#2 Transmitter Ground
8	#2 TDis	#2 Transmitter Disable Input Logic Low Level to Switch Laser “ON” Input Logic High Level to Switch Laser “OFF”
9	#2 TD	#2 Transmitter Data in
10	#2 $\overline{TD}$	#2 Transmitter Data In(Inverted)