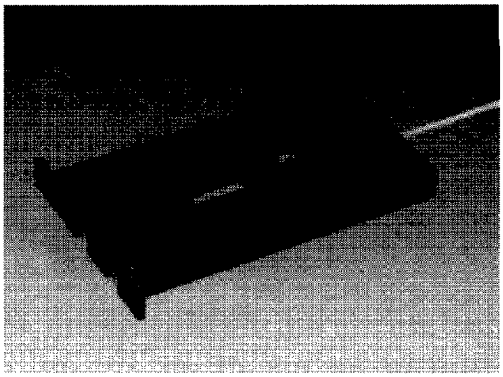
Description

The TRM5732AN is a lightwave transmitter for OC-12.

Features

- Complied with SONET/SDH standard
- DFB laser diode
- Operation from 1Mb/s to 622.08Mb/s at 1.3 μm wavelength
- 50Ω, AC-coupled interface
- Low-power-alarm and performance monitors



Absolute Maximum Ratings (T_C = 25°C)

Item	Symbol	Rated Value	Units
Operating case temperature	T_{opr}	–40 to 75	°C
Storage case temperature	T_{stg}	–40 to 85	°C
Humidity (long-term)	—	55	%
Lead soldering temperature	T_s	250	°C
Lead soldering time	—	10	sec

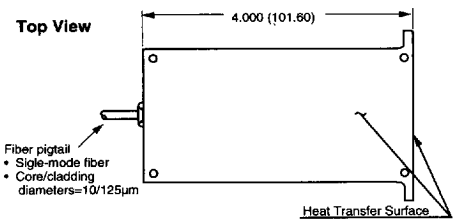
Optical Characteristics (Unless otherwise indicated, measurement conditions are T_C = 25°C, 50% duty-cycle data signal)

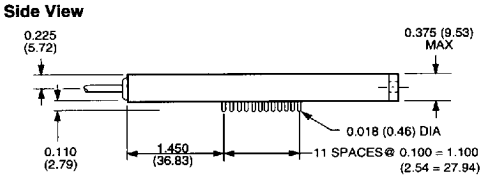
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Average power output	$\overline{P_O}$	–1.75	0	1.75	dBm	622Mb/s, T_C = 0 to 65°C
		–2.0	0	2.0		156Mb/s, T_C = –40 to 75°C
Center wavelength	λ_c	1280	1310	1335	nm	622Mb/s, T_C = 0 to 65°C
						156Mb/s, T_C = –40 to 75°C
Spectral width	$\Delta\lambda_{(-20dB)}$	—	—	1	nm	20 dB down
Side mode suppression ratio	S_r	30	—	—	dB	
Extinction ratio	—	10	—	—	dB	P_{OH} / P_{OL}
Optical rise and fall times	t_r, t_f	—	—	0.5	ns	10 to 90% (50% duty cycle)
Optical path penalty	—	—	—	1	dB	max. 110 ps/nm (1.3 μm) at 4% optical reflection

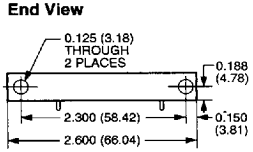
Electrical Characteristics (Unless otherwise indicated, measurement conditions are T_C = 25°C, 50% duty-cycle data signal)

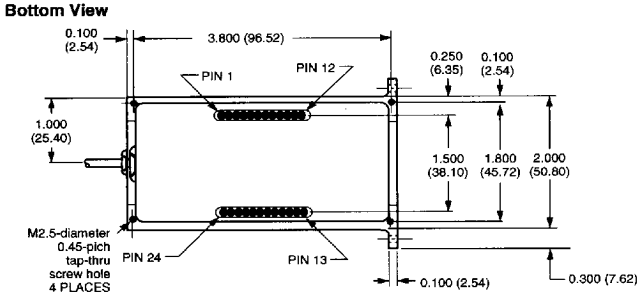
Item	Symbol	Min	Typ	Max	Units	Test Conditions
DC power supply voltage	V_{CC}	4.75	5.0	5.25	V	
	V_{EE1}	–4.95	–5.2	–5.45		
	V_{EE2}	–2.1	–2.2	–2.3		
DC power supply current	I_{CC}	—	—	800	mA	V_{CC} = 5.0 V ±5%
	I_{EE1}	—	—	200		V_{EE1} = –5.2 V ±5%
	I_{EE2}	—	—	1000		V_{EE2} = –2.2 V ±5%
Input data voltage	V_{IN}	0.6	0.8	1.0	V_{pp}	
Input transition time	T_{IN}	—	—	T/4	ns	10 to 90% (50% duty cycle) T: bit-period

Outline Drawings and Pin Descriptions









Pin	Description
1:	Case Ground (RF ground)
2:	Case Ground (RF ground)
3:	V_{EE1}
4:	V_{EE2}
5:	V_{CC}
6:	Case Ground (RF ground)
7:	DATA (50Ω, AC-coupled)
8:	Case Ground (RF ground)
9:	Case Ground (RF ground)
10:	Case Ground (RF ground)
11:	Case Ground (RF ground)
12:	No User Connection
13:	No User Connection
14:	Laser Bias Monitor (+)
15:	Laser Bias Monitor (–)
16:	Laser Backface Monitor (+)
17:	Laser Backface Monitor (–)
18:	Disable
19:	Case Ground (RF ground)
20:	Alarm Output
21:	Temperature Monitor (+)
22:	Temperature Monitor (–)
23:	Case Ground (RF ground)
24:	Case Ground (RF ground)

Tolerance: ±0.005 in. (±0.127 mm)
Dimension: inch (mm)