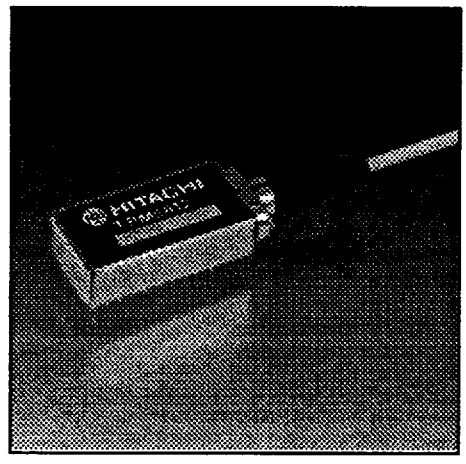
OC-1, OC-3 Lightwave Transmitter

Preliminary
- Under Development -

T-41-91

TRM5612AN

Features



- Complied with SONET/SDH standard
- Fabry-Perot laser Diode
- Operation at the rates of up to 200Mb/s at 1.3µm wavelength
- Uncooled laser with automatic optical power control for constant output power over temperature range
- Hermetically sealed, 20-pin DIP
- Performance monitors

Absolute Maximum Ratings

Item	Symbol	Value	Unit
Supply Voltage	V	5.5	V
Operating Case Temperature	-	0 to 65	°C
Storage Case Temperature	-	-40 to 85	°C
Humidity (long-term)	-	85	%
Lead Soldering Temperature	Ts	250	°C
Lead Soldering Time	-	10	s

Optical Characteristics (Tc=0 to 65°C)

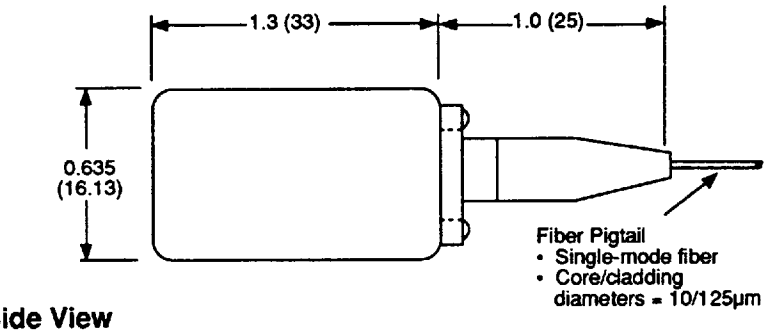
Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Average Power Output	$\bar{P}o$	-12	-8	-5	dBm	Single-mode fiber
Center Wavelength	λc	1260	1308	1360	nm	
RMS Spectral Width	$\Delta\lambda$	-	-	3.2	nm	
Extinction Ratio	-	10	-	-	dB	P_{OH} / P_{OL}
Optical Rise and Fall Times	tr, tf	-	-	T/3	nm	10 - 90% (50% duty cycle) T: bit-period

■ Electrical Characteristics (Tc=0 to 65°C)

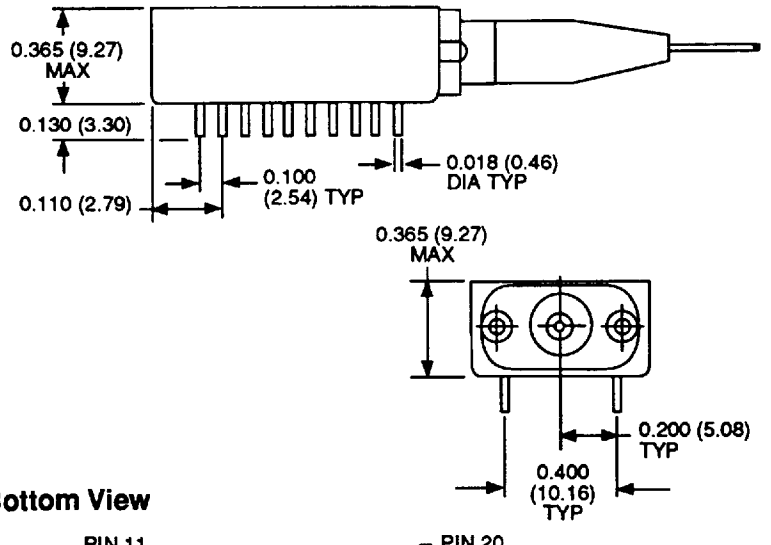
Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
DC Power Supply Voltage	V	4.75	5.0	5.50	V	
DC Power Supply Current	I	-	-	130	mA	Vcc=5.0V
Input Data Voltage LOW HIGH	 V_{IH} V_{IL}	 - -	 -1.8 -0.8	 - -	 V V	 Vcc=5.0V 50-ohm Load to (Vcc-2)V
Input Transition Time	T_{IN}	-	-	T/4	ns	10 - 90% (50% duty cycle) T: bit-period
Disable Voltage	V_D	Vcc -2.0	-	Vcc	V	
Enable Voltage	V_{EN}	V_{EE}	-	Vcc+0.8	V	

■ Outline Drawings and Pin Descriptions

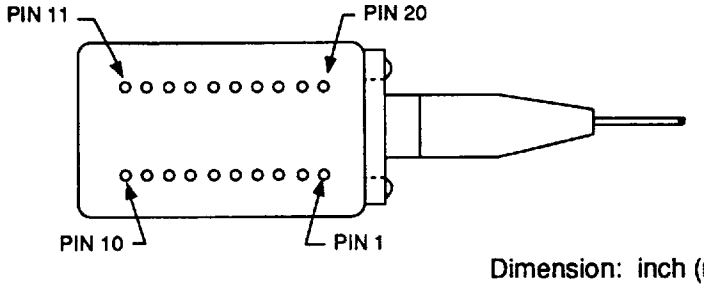
Top View



Side View



Bottom View



Pin	Description
1	No user connection
2	Laser-bias monitor (+)*
3	No user connection
4	Laser-bias monitor (-)*
5	V_{EE}
6	Vcc
7	Transmitter disable
8	Vcc
9	Vcc
10	No user connection
11	Case ground
12	Vcc
13	Case ground (RF ground)
14	V_{EE}
15	$\overline{DATA}$
16	DATA
17	Laser-backface monitor (-)*
18	Vcc
19	Laser-backface monitor (+)*
20	No user connection

* Laser backface and bias monitor functions are customer-use options that are used during manufacture and for diagnostics and are not required for normal operation of the transmitter.

Dimension: inch (mm)

Tolerances are ±0.005 in. (±0.127 mm)

*The specification described herein is subject to change without a prior notice.