

TRV5366

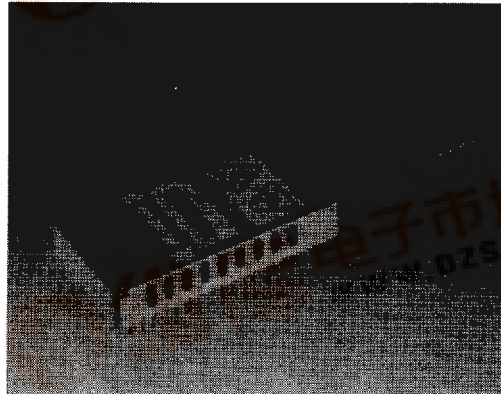
OC-1 Transceiver

Description

The TRV5366 is a lightwave transceiver for OC-1.

Features

- Fabry-Perot laser/InGaAs PIN-PD
- Operation at 51.84Mb/s for 1.3 μm wavelength
- ECL 10k interface
- Clock recovery using SAW filter
- TX: Low-power alarm and shutdown
- RX: Loss-of-signal (LOS) indicator



Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$)

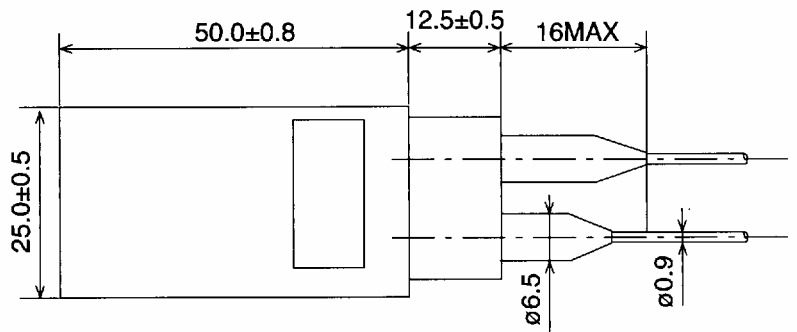
Item	Symbol	Rated Value	Units
Operating case temperature	T_{opr}	10 to 60	$^\circ\text{C}$
Storage case temperature	T_{stg}	-40 to 80	$^\circ\text{C}$
Supply voltages	V_{CC}	6.0	V
	V_{EE}	-5.75	
Lead soldering temperature	T_s	250	$^\circ\text{C}$
Lead soldering time	—	10	sec

Optical and Electrical Characteristics ($T_C = 25^\circ\text{C}$)

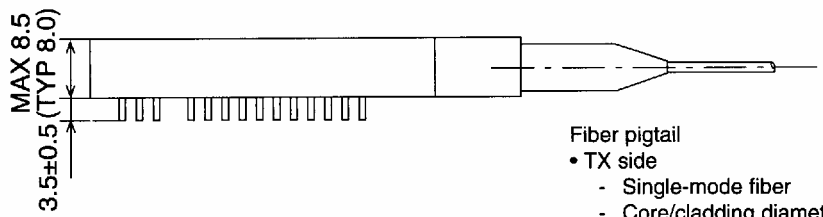
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Average power output	$\overline{P_O}$	-15	—	-8	dBm	$T_C = 10$ to 60°C
Center wavelength	λ_c	1270	1310	1360	nm	$T_C = 10$ to 60°C
Spectral width	$\Delta\lambda$	—	—	10	nm	FWHM
Extinction ratio	—	11	—	—	dB	P_{OH} / P_{OL}
Optical eye pattern mask	—	—	—	—	—	CCITT
Minimum received power	P_{inmin}	—	-25	-24	dBm	$2^{23} - 1$ NRZ, 10^{-11} BER
Maximum received power	P_{inmax}	-8	-7	—	dBm	$2^{23} - 1$ NRZ, 10^{-11} BER
DC power supply voltage	V_{CC}	4.75	5.0	5.25	V	
	V_{EE}	-4.94	-5.2	-5.46		
DC power supply current	I_{CC}	—	—	30	mA	$V_{CC} = 5.0$ V
	I_{EE}	—	—	350		$V_{EE} = -5.2$ V
Output rise and fall times	t_r, t_f	—	—	1.9	ns	20 to 80%

Outline Drawings and Pin Descriptions

Top View



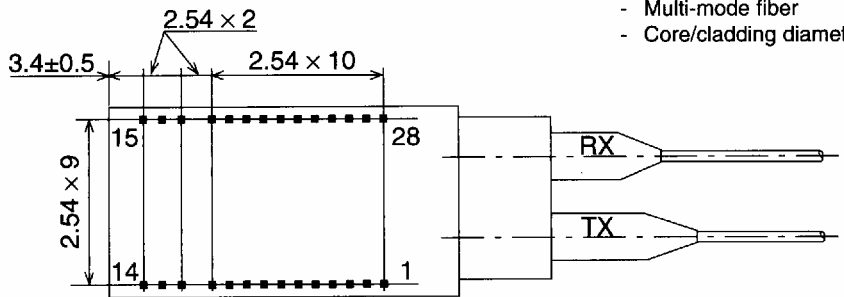
Side View



Fiber pigtail

- TX side
 - Single-mode fiber
 - Core/cladding diameter = 10/125 μm

Bottom View



- RX side
 - Multi-mode fiber
 - Core/cladding diameter = 50/125 μm

Dimension: mm

Pin	Description	Pin	Description
1:	TX Ground	15:	Data Out
2:	TX Ground	16:	Data Out
3:	TX V_{EE1}	17:	RX Ground
4:	TX Alarm Out	18:	RX Alarm Out
5:	Clock In	19:	RX V_{EE2}
6:	Data In	20:	RX V_{EE2}
7:	Shutdown In	21:	RX Ground
8:	RX V_{EE2}	22:	RX Ground
9:	RX Ground	23:	RX Ground
10:	RX Ground	24:	RX Ground
11:	RX V_{EE2}	25:	V_{CC}
12:	RX V_{EE2}	26:	RX Ground
13:	Clock Out	27:	V_{EE3}
14:	Clock Out	28:	V_{EE3}