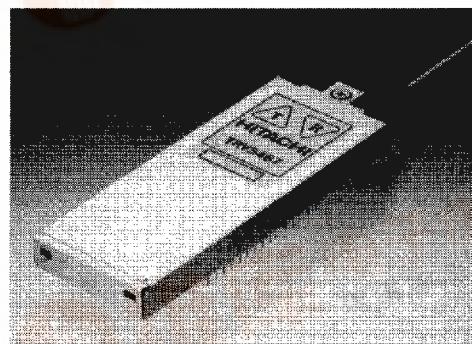


## Description

The TRV5467 is a lightwave transceiver for OC-3.

## Features

- Complied with SDH standard
- Fabry-Perot laser/Ge APD
- Operation at 155.52Mb/s for 1.3  $\mu$ m wavelength
- ECL 10k interface
- Clock recovery using SAW filter
- TX: Low-power alarm and shutdown
- RX: Loss-of-signal (LOS) indicator



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

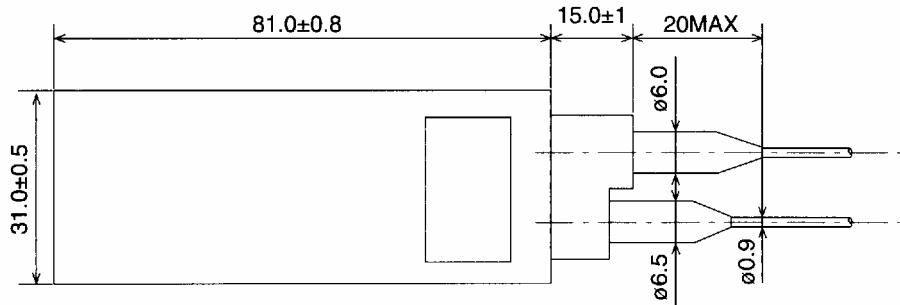
Item	Symbol	Rated Value	Units
Operating case temperature	$T_{\text{opr}}$	10 to 60	$^\circ\text{C}$
Storage case temperature	$T_{\text{stg}}$	-40 to 80	$^\circ\text{C}$
Supply voltages	$V_{\text{CC}}$	6.0	V
	$V_{\text{EE}}$	-5.75	
Lead soldering temperature	$T_s$	250	$^\circ\text{C}$
Lead soldering time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

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

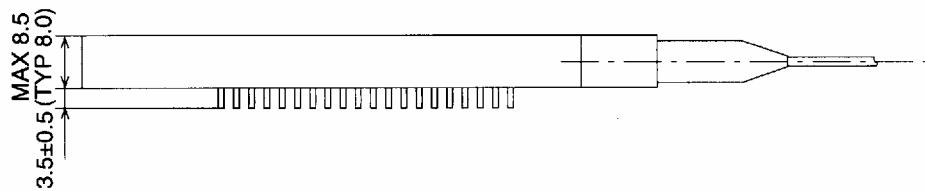
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Average power output	$P_{\text{O}}$	-3	0	3	dBm	$T_C = 10$ to $60^\circ\text{C}$
Center wavelength	$\lambda_c$	1290	1310	1330	nm	$T_C = 10$ to $60^\circ\text{C}$
Spectral width	$\Delta\lambda$	—	—	10	nm	FWHM
Extinction ratio	—	13	—	—	dB	$P_{\text{OH}} / P_{\text{OL}}$
Optical eye pattern mask	—	—	—	—	—	CCITT
Minimum received power	$P_{\text{inmin}}$	—	-36	-35	dBm	$2^{23} - 1$ NRZ, $10^{-11}$ BER
Maximum received power	$P_{\text{inmax}}$	-17	-16	—	dBm	$2^{23} - 1$ NRZ, $10^{-11}$ BER
DC power supply voltage	$V_{\text{CC}}$	4.75	5.0	5.25	V	
	$V_{\text{EE}}$	-4.94	-5.2	-5.46		
DC power supply current	$I_{\text{CC}}$	—	—	30	mA	$V_{\text{CC}} = 5.0$ V
	$I_{\text{EE}}$	—	—	400		$V_{\text{EE}} = -5.2$ V
Output rise and fall times	$t_r, t_f$	—	—	1.9	ns	20 to 80%
Timing jitter (RMS)	—	—	—	2	deg	$2^{23} - 1$ NRZ

## Outline Drawings and Pin Descriptions

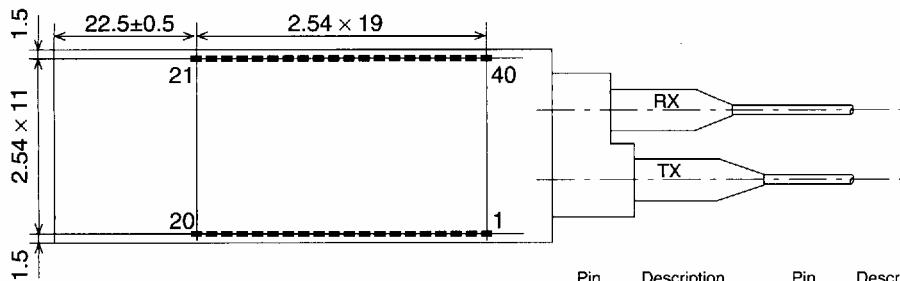
## Top View



## Side View



## Bottom View



2

## Fiber pigtail

- TX side
  - Single-mode fiber
  - Core/cladding diameter = 10/125  $\mu$ m
- RX side
  - Multi-mode fiber
  - Core/cladding diameter = 50/125  $\mu$ m

Dimension: mm

Pin	Description	Pin	Description
1:	TX Ground	21:	RX Ground
2:	TX Ground	22:	RX V <sub>EE2</sub>
3:	TX V <sub>EE1</sub>	23:	Data Out
4:	TX Alarm Out	24:	<u>Data Out</u>
5:	Clock In	25:	RX Alarm Out
6:	Data In	26:	RX Ground
7:	Shutdown In	27:	RX Ground
8:	RX V <sub>EE2</sub>	28:	RX Ground
9:	RX Ground	29:	RX Ground
10:	RX Ground	30:	RX V <sub>EE2</sub>
11:	RX Ground	31:	RX V <sub>EE2</sub>
12:	RX Ground	32:	RX Ground
13:	RX Ground	33:	RX Ground
14:	RX Ground	34:	RX Ground
15:	RX Ground	35:	RX Ground
16:	RX V <sub>EE2</sub>	36:	RX Ground
17:	<u>Clock Out</u>	37:	V <sub>CC</sub>
18:	Clock Out	38:	RX Ground
19:	RX Ground	39:	V <sub>EE3</sub>
20:	RX V <sub>EE2</sub>	40:	V <sub>EE3</sub>