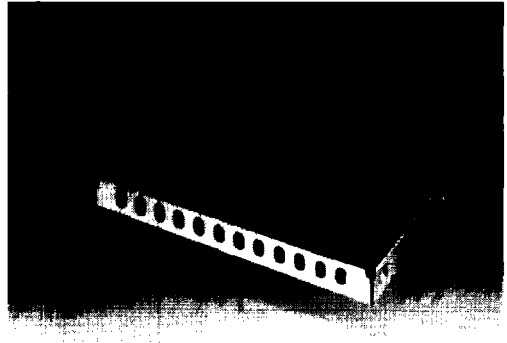


## Description

The RCV5703AN is a lightwave receiver for OC-12.

## Features

- Complied with SONET/SDH standard
- InGaAs PIN-PD
- Operation at 622.08Mb/s for 1.3  $\mu\text{m}$  or 1.55  $\mu\text{m}$  wavelength
- Wide dynamic range: 18 dB
- ECL 10k interface
- Clock recovery using SAW filter
- Loss-of-signal (LOS) indicator and photo-current monitors



## Absolute Maximum Ratings

Item	Symbol	Rated Value	Units
Operating case temperature	$T_{opr}$	0 to 65	$^{\circ}\text{C}$
Storage case temperature	$T_{stg}$	-20 to 75	$^{\circ}\text{C}$
Supply voltages	$V_{CC}$	6.0	V
	$V_{EE}$	-6.0	
Lead soldering temperature	$T_s$	250	$^{\circ}\text{C}$
Lead soldering time	—	10	sec

## Optical Characteristics $(T_a = 25^{\circ}\text{C}, \lambda = 1.3 \mu\text{m})$

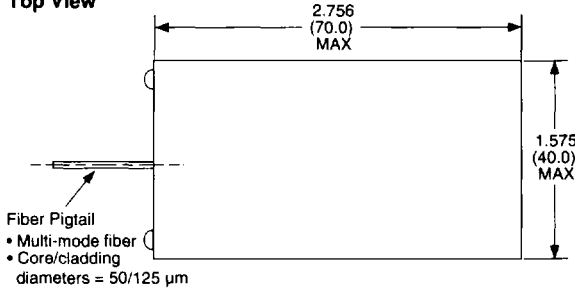
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Minimum received power	$P_{inmin}$	—	-28	-27	dBm	$2^{23} - 1$ NRZ, $10^{-10}$ BER
Maximum received power	$P_{inmax}$	-6	-5	—	dBm	$2^{23} - 1$ NRZ, $10^{-10}$ BER

Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

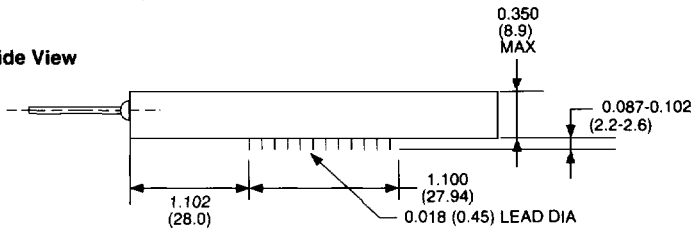
Item	Symbol	Min	Typ	Max	Units	Test Conditions
DC power supply voltage	$V_{CC}$	4.75	5.0	5.25	V	
	$V_{EE}$	-4.94	-5.2	-5.46		
DC power supply current	$I_{CC}$	—	—	50	mA	$V_{CC} = 5.0\text{ V}$
	$I_{EE}$	—	—	250		$V_{EE} = -5.2\text{ V}$
Output rise and fall times	$t_{r, f}$	—	—	500	ps	10 to 90%
Timing jitter (RMS)	—	—	—	2	deg	$2^{23} - 1\text{ NRZ}$

Outline Drawings and Pin Descriptions

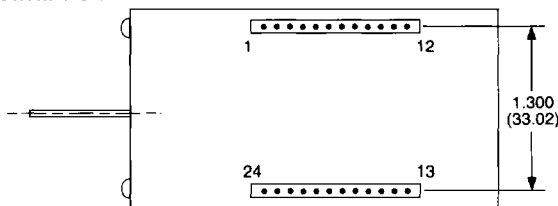
Top View



Side View



Bottom View



Pin	Description
1:	Photocurrent Monitor (+)
2:	Photocurrent Monitor (-)
3:	LOS Indicator *
4:	Ground
5:	No User Connection
6:	Ground
7:	Data out
8:	Data out
9:	Ground
10:	Clock out
11:	Clock out
12:	Ground
13:	Ground
14:	No Connection
15:	Ground
16:	-5.2V
17:	Ground
18:	No User Connection
19:	Ground
20:	+5V
21:	Ground
22:	Ground
23:	No Connection
24:	Ground

\* LOS Indicator goes to CMOS high level at the absence of optical signal input.

Tolerance:  $\pm 0.012\text{ in.}$  ( $\pm 0.3\text{ mm}$ )  
 Dimension: inch (mm)

HITACHI®

Hitachi America, Ltd. • 2000 Sierra Point Pkwy. • Brisbane, CA 94005-1835 • (415) 589-8300

Part  
**2** 373

2