



INFRARED REMOTE CONTROL RECEIVER MODULES

T-77-11

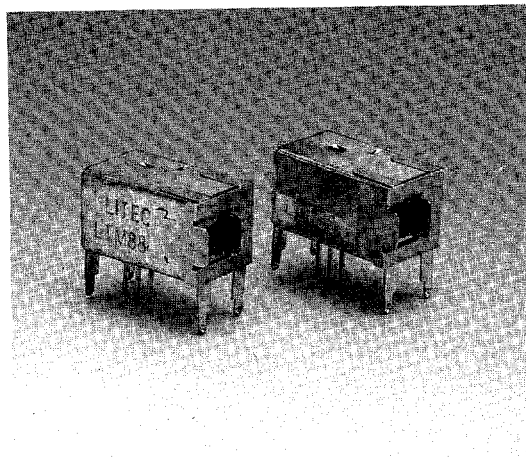
LTM-8848A

FEATURES

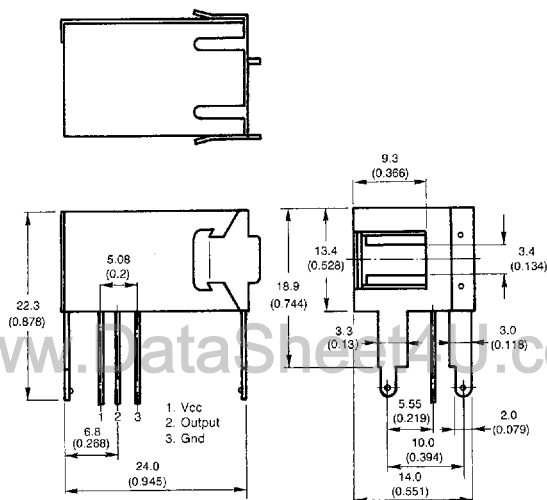
- EASY TO HANDLE SMALL TYPE MODULE.
- EXCELLENT MECHANICALLY STRENGTH AND ELECTRICAL STABILITY.
- CAN BE INSTALLED DIRECTLY TO EQUIPMENT.

DESCRIPTION

- The module is a small type infrared remote control system receiver which has been developed and designed by utilizing the latest hybrid technology.
- It is a single unit type module which incorporates a PIN diode and a receiving preamplifier IC.
- It can be used for TVs, VTRs, audio equipment, air conditioners, car stereo radio, toys, home computers and all other equipments requiring remote control.



PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.

INFRARED REMOTE CONTROL RECEIVER

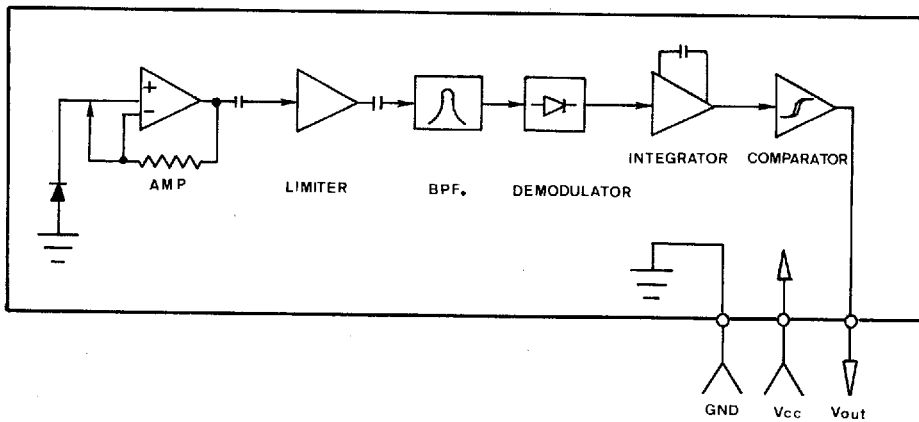
1. ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

* Supply voltage	Vcc	6.3	V
* Storage temperature	Tstg	-20 to +60	°C
* Operating temperature	Topr	-10 to +60	°C

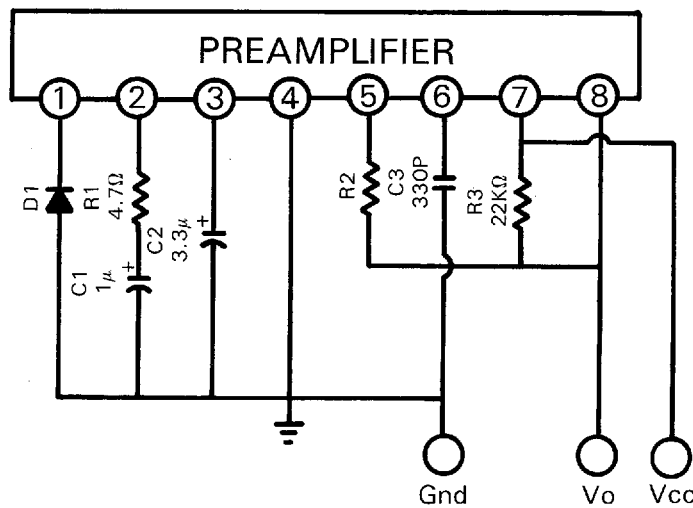
2. RECOMMENDED OPERATING CONDITION

* Supply voltage	Vcc	4.7 to 5.3	V
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3. MODULE SCHEMATIC



4. RECEIVER MODULE EQUIVALENT CIRCUIT



INFRARED PRODUCTS

5. MEASURE METHOD

A. Standard transmitter:

The transmitter whose output is adjusted up become $V_o = 400 \text{ mVp-p}$ by the output waveform as shown in Fig. 1 and using the measuring method as shown in Fig. 2 is specified as the standard transmitter. However, the infrared diode to be used for the transmitter should be $\lambda_{\text{peak}} = 940 \text{ nm}$, $\Delta\lambda = 50 \text{ nm}$.

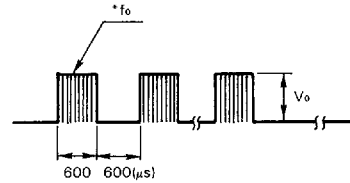


Fig. 1 Output waveform

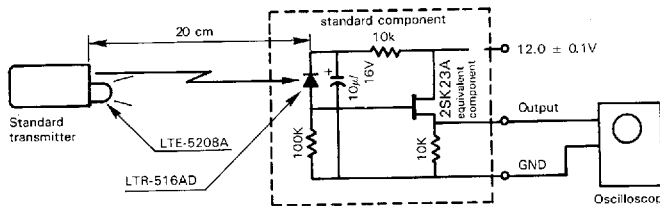
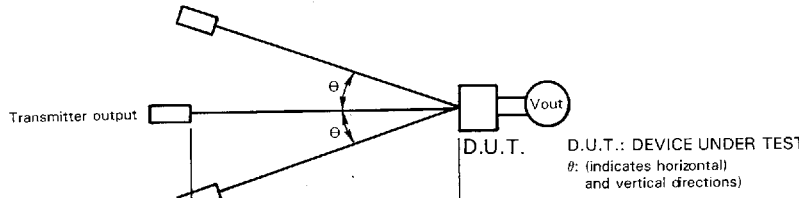


Fig. 2 Measuring method

B. Arrival distance measuring condition as shown in Fig. 3



D.U.T.: DEVICE UNDER TEST
 θ : (indicates horizontal and vertical directions)

Fig. 3 Arrival distance L measuring condition

C. Pulse width measuring condition

Specifies at the TWL and the TWH period of the output pulse by using the aforementioned standard transmitter as shown in Fig. 4.

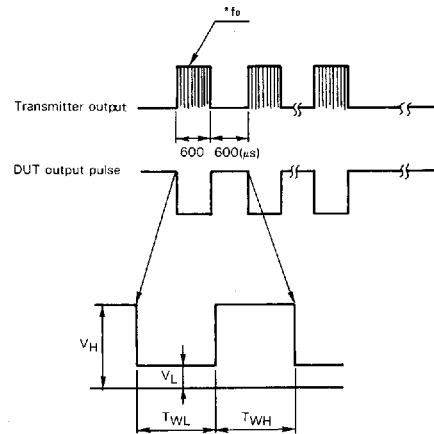


Fig. 4 Output pulse

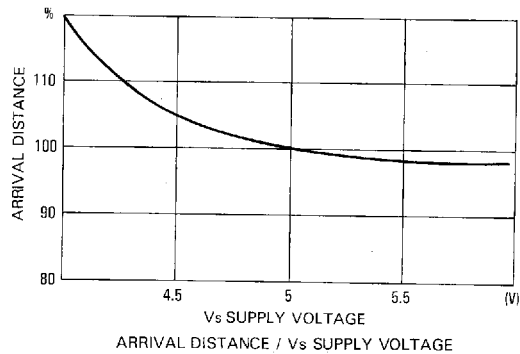
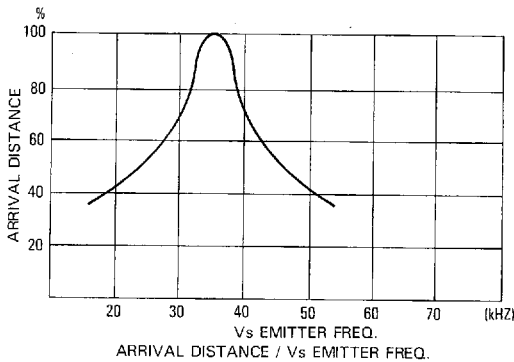
6. ELECTRICAL CHARACTERISTICS

(Ta = 25°C, Vcc = 5V)

ITEM	SYMBOL	CONDITION	RATING			UNIT
			MIN.	TYP.	MAX.	
Current consumption	Icc	Non-signal input	1.1		2.5	mA
Arrival distance	L	At the ray axis	8.0	10.0		m
		The ray receiving surface at a vertex and in relation to the ray axis: a. In the range of 30° cone b. In the range of 45° cone	6.0 3.0			
Low level output voltage	VL	30 cm over the ray axis			0.5	V
High level output voltage	VH	30 cm over the ray axis	4.5			V
Low level pulse width	TWL	Specified by the output TWL period within a range from 5cm to the arrival distance (Average value of 50 pulses)	410	660	910	μs
High level pulse width	TWH	Specified by the output TWH period within a range from 5cm to the arrival distance (Average value of 50 pulses)	290	540	790	μs

* CARRIER WAVE FREQUENCY F0 = 36 KHZ

7. ELECTRICAL CHARACTERISTIC CURVES



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