



承 认 书

SPECIFICATION FOR APPROVAL

客户名称：
CUSTOMER _____

产品名称： 红外接收头
PARTANME _____

规格料号： HL-HO38LS
PART NO _____

客户签章			鸿利泰签章		
DESIGNER	CHECKER	APPROVER	DESIGNER	CHECKER	APPROVER
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INFRARED RECEIVER MODULE

● Description

The HL-HO38LS is miniaturized infrared receivers for remote control and other applications requiring improved ambient light rejection.

The separate PIN diode and preamplifier IC are assembled on a single leadframe.

The epoxy package contains a special IR filter.

This module has excellent performance even in disturbed ambient light applications and provides protection against uncontrolled output pulses.



● Features

- Wide Operating Supply Voltage 2.5V ~ 5.5 V
- Internal voltage reference circuit for wide operating built-in.
- Maximum interference safety against external light sources.
- No external components necessary.
- Internal filter for a high frequency lighting fluorescent lamp
- Built-in automatic bias control for sunlight.
- Output active low.

● Applications:

1. Optical switch
2. Light detecting protion of remote contol
 - AV instruments such as Audio,TV,VCR,CD,MD,DVD,etc.
 - Home appliances such as Air-conditioner,Fan,etc.
 - CATV set top boxes
 - Multi-media Equipment

● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit	Notice
Supply Voltage	V _s	0 - 6.0	V	—
Operating Temperature	T _{opr}	-20~+65	°C	—
Storage Temperature	T _{stg}	-40~+85	°C	—
Soldering Temperature	T _{sd}	260	°C	4mm from mold body less than 5 sec

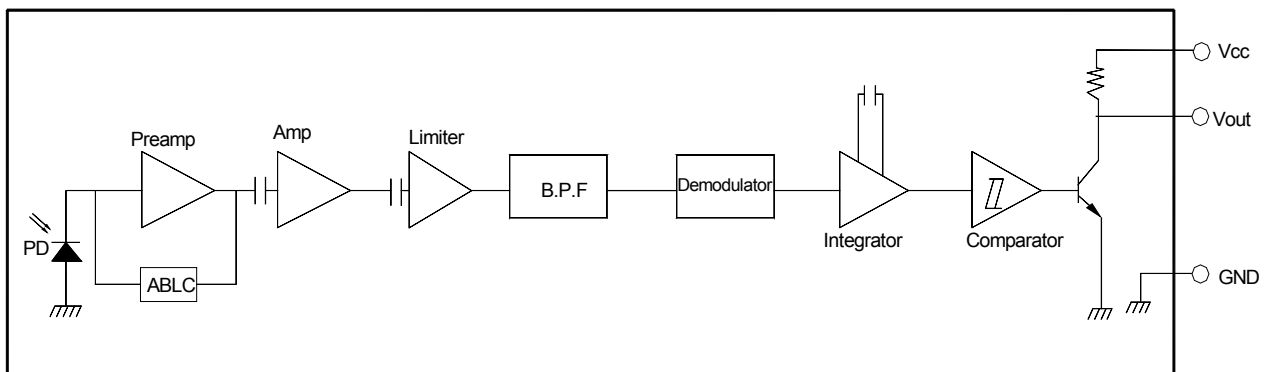
● **Electrical And Optical Characteristics**($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Ratings			Unit	Condition
		Min.	Typ.	Max.		
Supply Voltage	V_s	2.7	—	5.5	V	
Supply Current	I_{cc}	—	0.25	0.6	mA	No signal input
Reception Distance	L_0	16	—	—	m	At the ray axis*1
	L_{45}	8	—	—		
B.P.F Center Frequency	f_o	—	38	—	KHz	
Peak Wavelength	λ_p	—	940	—	nm	
Half Angle	θ	—	45	—	deg	At the ray axis *1
High Level Pulse Width	T_H	400	—	800	μS	At the ray axis *2
Low Level Pulse Width	T_L	400	—	800	μS	
High Level Output Voltage	V_H	$V_{cc}-0.3$	—	—	V	
Low Level Output Voltage	V_L	—	—	0.4	V	

*1:The ray receiving surface at a vertex and relation to the ray axis in the range of $\theta=0^{\circ}$ and $\theta=45^{\circ}$

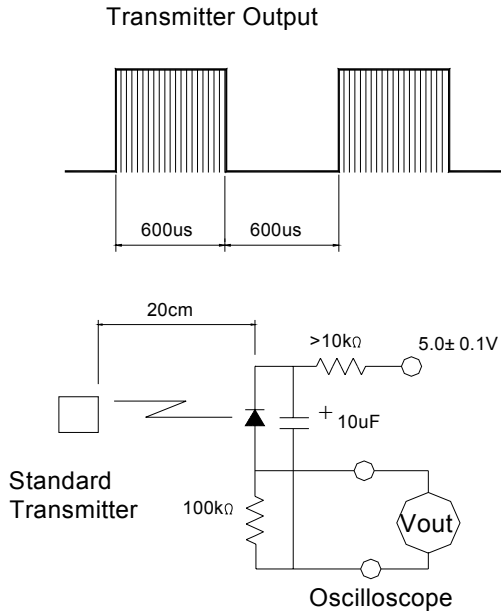
*2:A range from 30cm to the arrival distance. Average value of 50 pulses

● **BLOCK DIAGRAM**

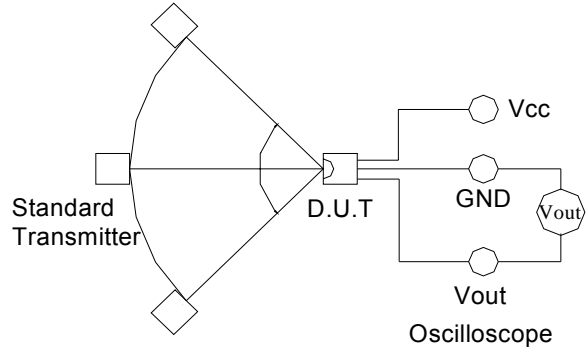


● **Test Method**

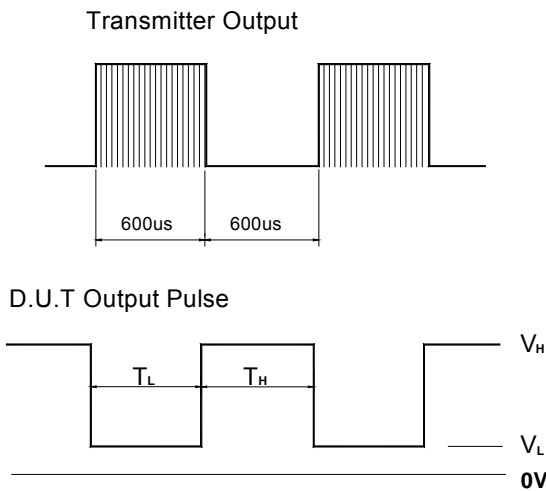
A. Standard Transmitter



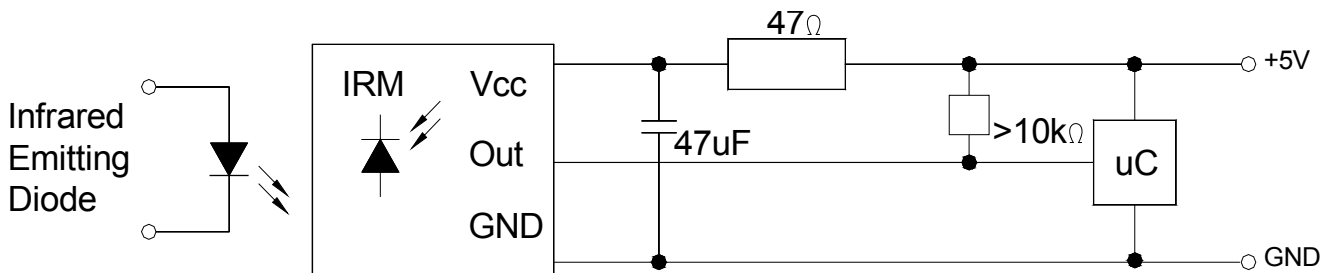
B. Detection Length Test



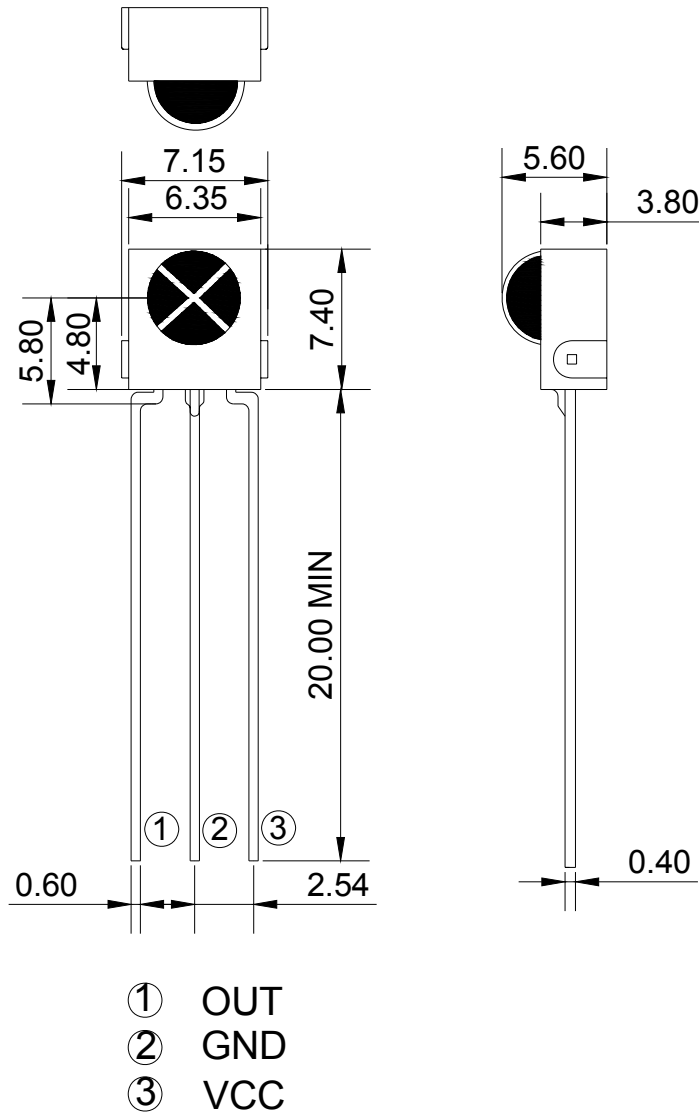
C. Pulse Width Test



● **Application Circuit**



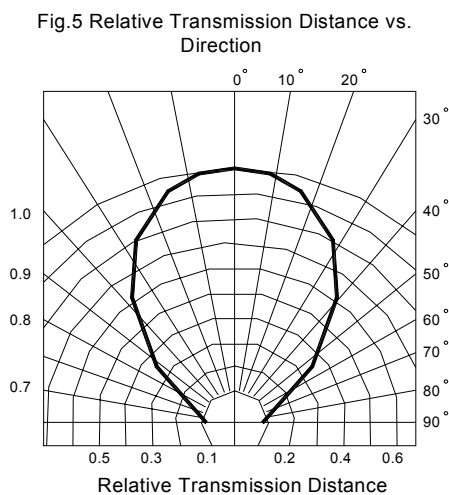
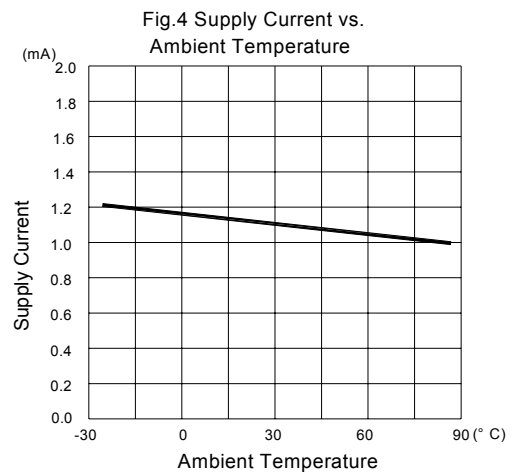
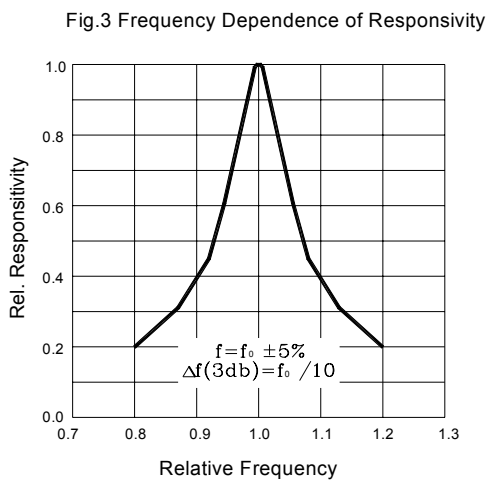
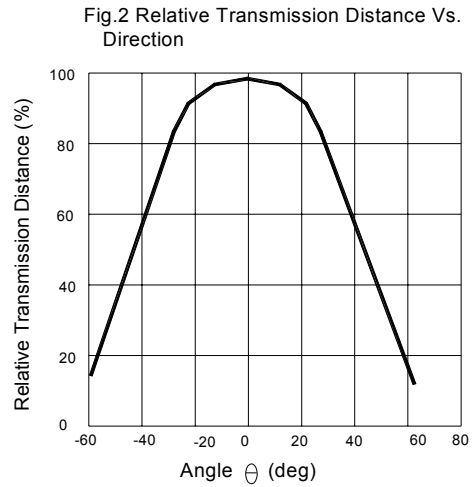
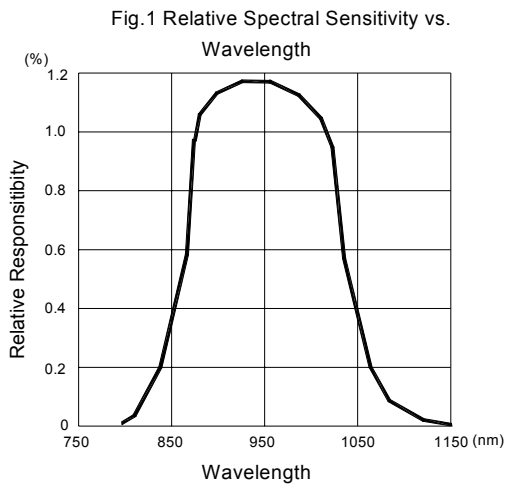
● Package Dimensions:



NOTES:

- 1.All dimensions are in millimeters (inches).
- 2.Tolerance is $\pm 0.30\text{mm}$ (0.012") unless otherwise specified.
- 3.Specifications are subject to change without notice.

● **Electrical And Optical Curves(Ta=25°C)**





● **acceptable code list**

data format	code acceptable
NEC	O
RC5_Philips	O
RC6_Philips	O
Toshiba	O

● **Use matters needing attention**

- store and use where there is no force causing transformation or change in quality
- store and use where there is no extreme humidity
- in order to prevent damage from static electricity make sure that the human body and the Soldering iron are connected to ground before using
- Please from the bottom of the resin for welding for more than 2 mm
- Dip soldering: please below 260 degrees, 5 seconds to complete welding
- Soldering iron: please below 350 degrees, 3 seconds to complete welding
- Please avoid correct position after welding
- When welding in the lead frame please don't put pressure on the heated condition
- When the circuit board is installed, the mounting hole distance is consistent With the lead frame