



Item no. 1571478

V1_07102018_01_en

IR Receiver 2.7V - 5.5V

INFRARED RECEIVER MODULE

Description

The OS-1638 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

- Photo detector and preamplifier in one package .
- Internal filter for PCM frequency.
- Inner shield,good anti-interference ability.
- · High immunity against ambient light.
- · Improved shielding against electric field disturbance
- 3.0V or 5.0V supply voltage; low power consumption.
- · TTL and CMOS compatibility.
- Suitable transmission code:NEC code,RC5 code.

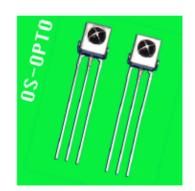
Applications:

- 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	Vs	2.7-5.5	V	_
Operating Temperature	Topr	-20~+65	°C	_
Storage Temperature	Tstg	-40~+85	°C	_
Soldering Temperature	Tsd	260	°C	4mm from mold body less than 5 sec

OS-1638



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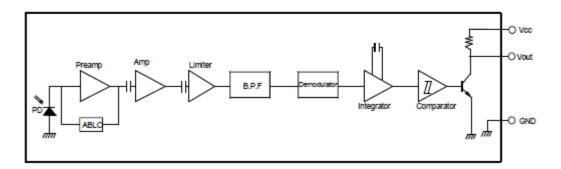
Electrical And Optical Characteristics (Ta=25°C)

OS-1638

Parameter	Symbol	Ratings			Unit	Condition
		Min.	Тур.	Max.		
Supply Voltage	Vs	2.7		5.5	٧	
Supply Current	lcc	_	0.35	0.6	mA	Iin=OuA, Vcc=5V
Reception Distance	Lo	20			m	At the ray axis*1
	L ₄₅	16	_	_		
B.P.F Center Frequency	fo	_	38	_	KHz	
Peak Wavelength	λр	_	940	_	nm	
Half Angle	θ±	_	45	_	deg	At the ray axis *1
High Level Pulse Width	Тн	450	600	750	μS	- At the ray axis *2
Low Level Pulse Width	TL	450	600	750	μS	
High Level Output Voltage	V _H	4.5	_	_	٧	
Low Level Output Voltage	V _L	_	-	0.5	٧	

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

BLOCK DIAGRAM



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



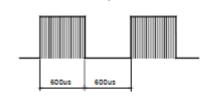
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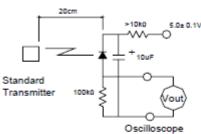
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●Test Method

A.Standard Transmitter

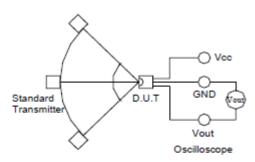
Transmitter Output





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B.Detection Length Test

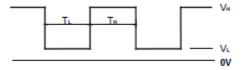


C.Pulse Width Test

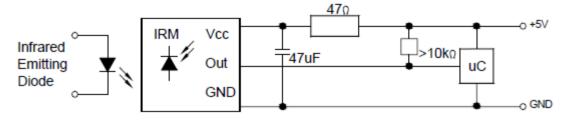
Transmitter Output



D.U.T Output Pulse



Application Circuit



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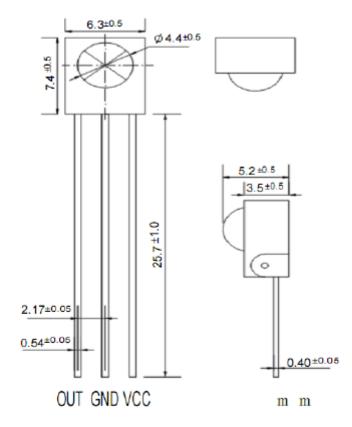


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●Package Dimensions:

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NOTES:

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

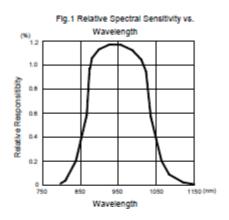


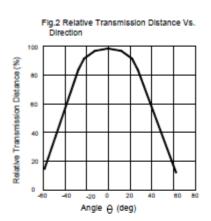
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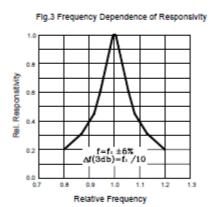
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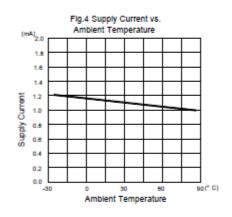
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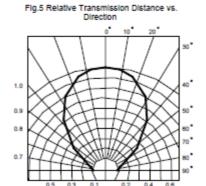
Electrical And Optical Curves(Ta=25^oC)











Relative Transmission Distance