

MODEL 產品型號：XL-0638LS

Description

The XL-0638LS is miniaturized infrared receivers for remote control and other applications requiring improved ambient lightrejection. 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



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3.0V or 5.0V supply voltage; low power consumption.

TTL and CMOS compatibility.

Suitable transmission code:NEC code, RC5 code.

Applications:

Optical switch

Light detecting portion of remote control

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

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Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	Unit	Notice
Supply Voltage	Vs	2.7~6.5	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

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Electrical Optical Characteristics

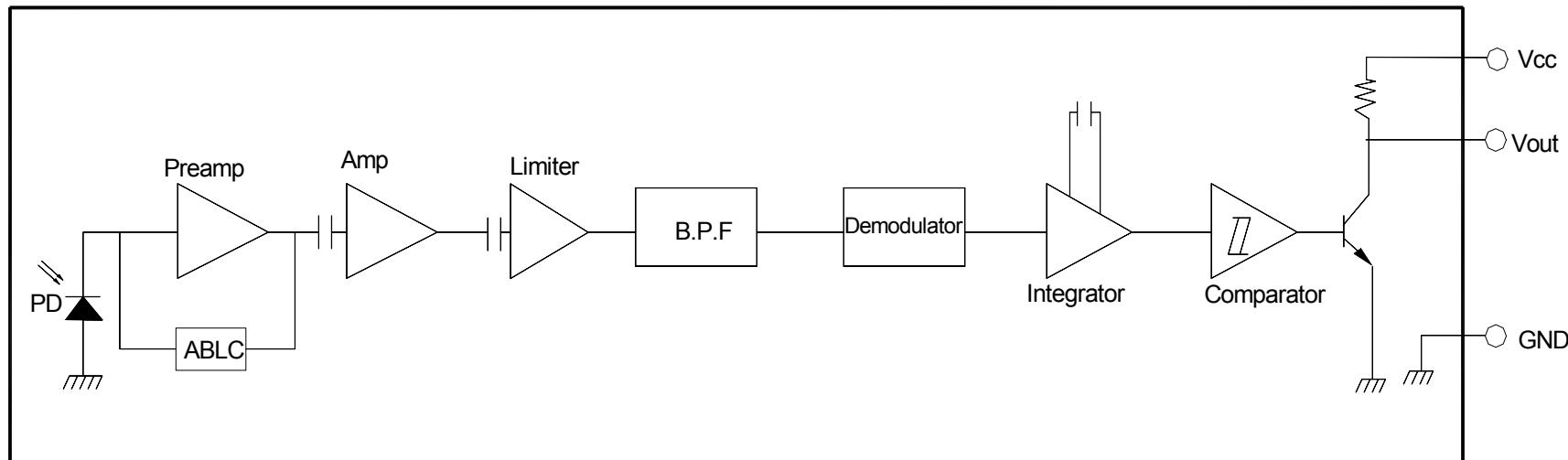
Parameter	Symbol	Ratings			Unit	Condition
		Min.	Typ.	Max.		
Supply Voltage	V _s	2.7	—	5.5	V	
Supply Current	I _{cc}	—	—	1.5	mA	No signal input
Reception Distance	L ₀	18	—	—	m	At the ray axis*1
	L ₄₅	9	—	—		
B.P.F Center Frequency	f _o	—	38	—	KHz	
Peak Wavelength	λ _p	—	940	—	nm	
Half Angle	θ	—	45	—	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	4.5	—	—	V	
Low Level Output Voltage	V _L	—	—	0.5	V	

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*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

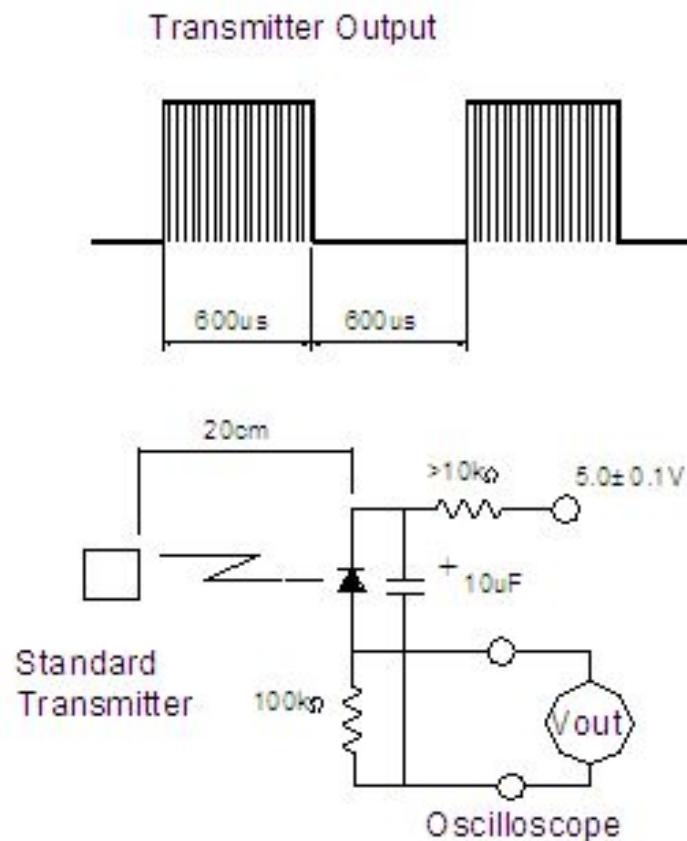
BLOCK DIAGRAM



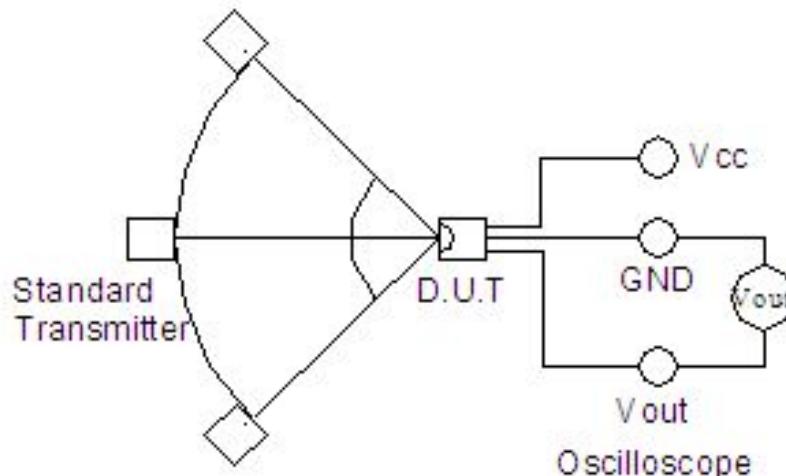
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Test Method

A. Standard Transmitter



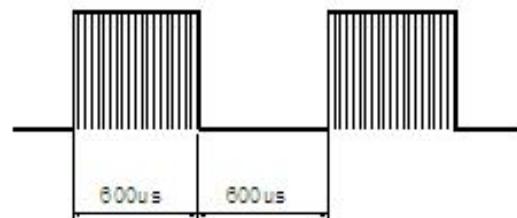
B. Detection Length Test



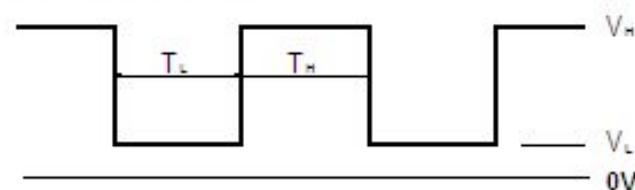
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C.Pulse Width Test

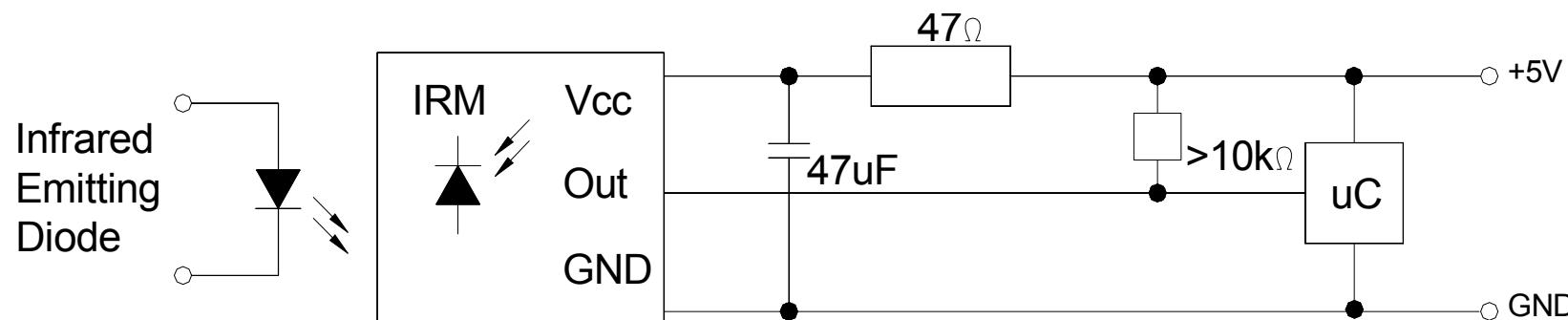
Transmitter Output



D.U.T Output Pulse

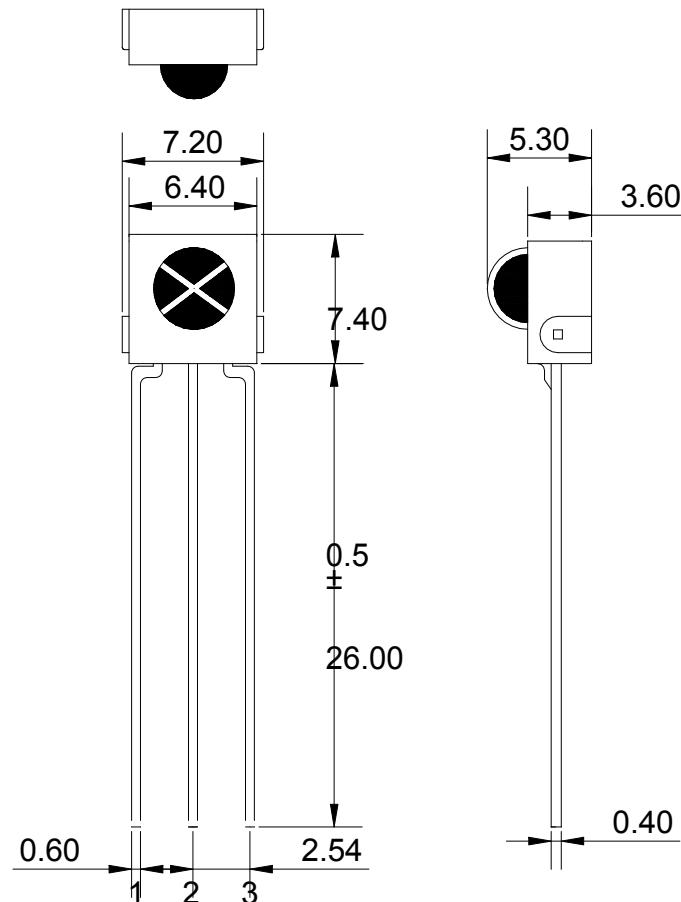


Application Circuit



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Package Dimensions



- ① OUT
- ② GND
- ③ VCC

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.

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Electrical And Optical Curves(Ta=25°C)

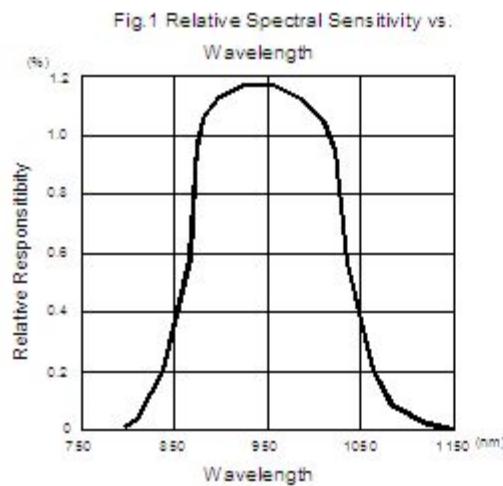


Fig.2 Relative Transmission Distance Vs. Direction

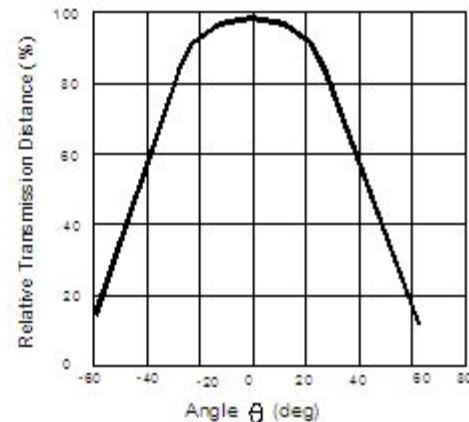


Fig.3 Frequency Dependence of Responsivity

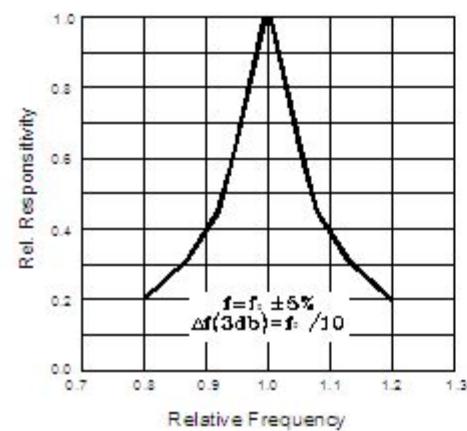
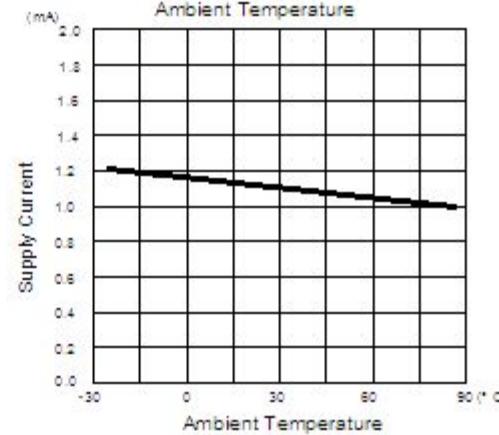


Fig.4 Supply Current vs. Ambient Temperature



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Fig.5 Relative Transmission Distance vs.
Direction

