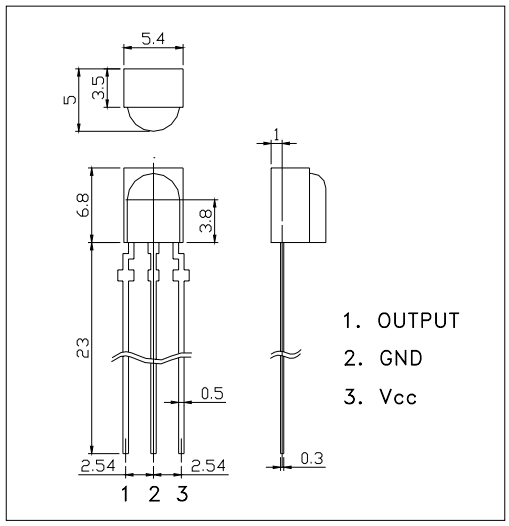
1. Features:

- ✧ Miniature size
- ✧ Built-in exclusive IC
- ✧ Wide half angle & long reception distance
- ✧ Good noise-proof capability
- ✧ High immunity against ambient light
- ✧ High protection ability to EMI
- ✧ Side view

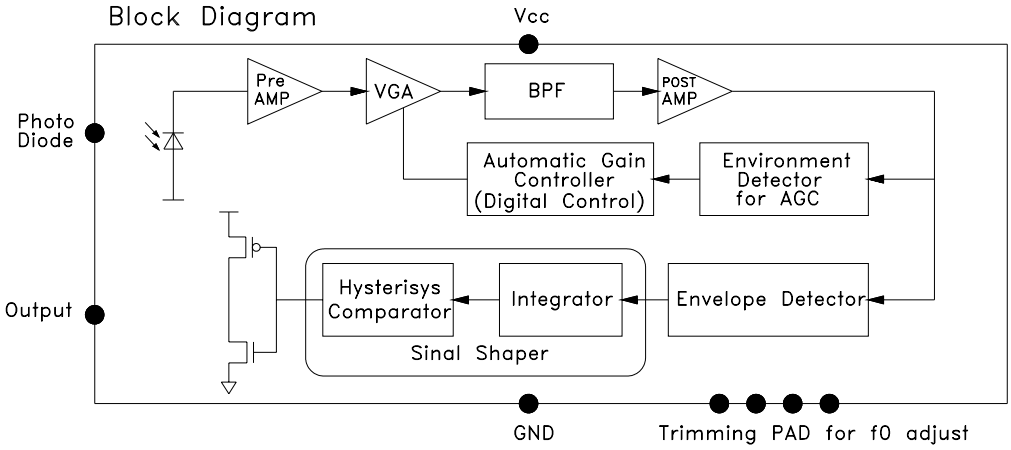
Dimensions



2. Applications

- ✧ AV instruments(LCD-TV, DVB, DVD player)
- ✧ Home appliances (Air-conditioner, Fan, Light)
- ✧ Remote control for wireless devices

3. Block Diagram



4. Absolute Maximum Ratings

(Ta=25℃)

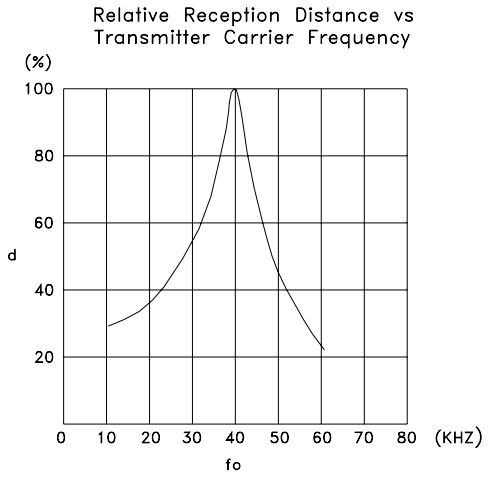
Parameter	Symbol	Ratings	Unit
Supply Voltage	Vcc	6.0	V
Operating Temperature	Topr	-10~+60	℃
Storage Temperature	Tstg	-20~+75	℃
Soldering Temperature*1	Tsol	240	℃

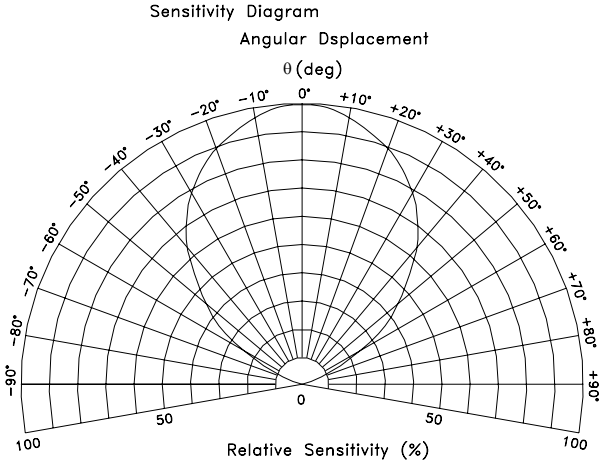
*1 At the position of 2mm from the bottom of the package within 5seconds.

5. Electro-optical Characteristics

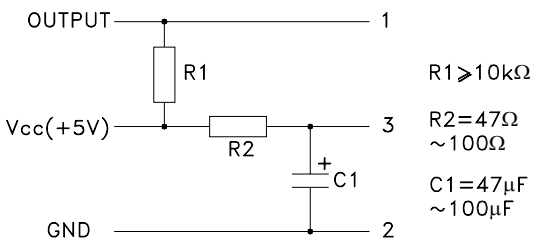
(Ta=25℃)

Parameter	Symbol	Conditions		Min	Typ.	Max.	Unit
Supply voltage	Vcc			2.7	5.0	5.5	V
Current Consumption	Icc	Input Signal=0			0.8		
Reception Distance	d	200±5Lux	θ=0°	15			m
			θ=±45°	8			m
Half Angle	Δθ				±45		deg
B.P.F. Center Frequency	Fo				37.9		kHz
Peak Wavelength	λρ				940		nm
Signal Output	So			---Active Low---			
High Level Output Voltage	Voh			Vcc-0.5			V
Low Level Output Voltage	Vol				0.2	0.4	V
High Level Pulse Width	Twh	Burst Wave=600μs		500	600	700	μs
Low Level Pulse Width	Twl			500	600	700	μs





In case of noisy power supply, please serially insert 100Ω resistor and about 47μF electrolytic capacitor in Vcc line and ground as follows:



6. Reliability Test Items

Test Items	Test Conditions	Ratings
High Temperature Storage	Ta=60℃, Vcc=5.0V	t=240hr.
Low Temperature Storage	Ta=-10℃, Vcc=5.0V	t=240hr.
High Temperature High Humid Storage	Ta=40℃, 90%RH, Vcc=5.0V	t=240hr.
Temperature Cycling	-20℃(30min)~+70℃(30min)	20 cycles
Soldering Heat	240±5℃	5 sec.

Testing Method

Distance between emitter and detector specifies maximum distance that output waveform satisfies the standard (FIG-1) under the conditions below against the standard transmitter.

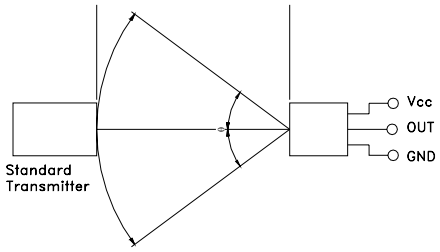
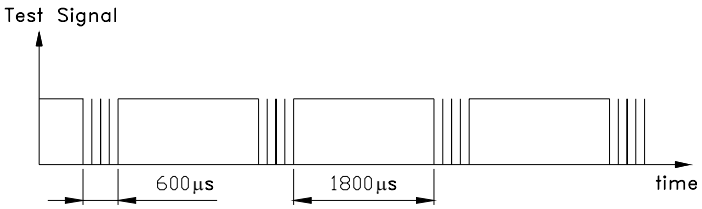


FIG-1

a. Measuring place
Indoor without extreme reflection of light.

b. Ambient light source
Detecting surface illumination is 200±5Lux under ordinary white fluorescence lamp of no high frequency lightning.



Tcyc-Td>25ms is recommended for optimal function

c. Standard transmitter
Transmitter wave indicated in FIG-2 of standard transmitter is arranged to satisfy Vo≥50mVp-p under the measuring circuit specified in FIG-3.

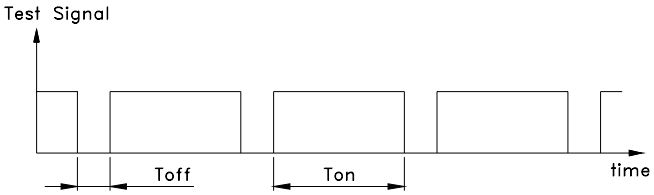


FIG-2

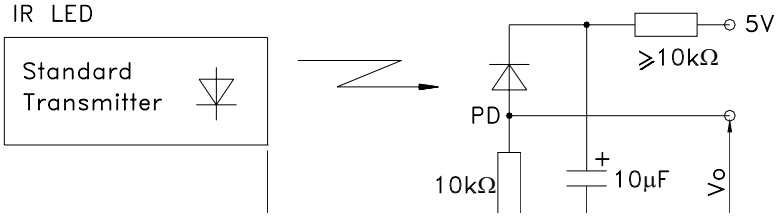


FIG-3 Power output Measurement Circuit

7. Precautions for Use

a. Store and use where there is no force causing transformation or change in quality.
b. Store and use where there is no corrosive gas or sea(salt)breeze.
c. Store and use where there is no extreme humidity.
d. Solder the lead pin within the condition of ratings. After soldering, do not add exterior force.
e. Do not wash this device. Wipe the stains of diode side with a soft cloth. You can use the solvent, ethyl alcohol, or methyl alcohol only.
f. To prevent static electricity damage to the pre-amp, make sure that the human body, the soldering iron are connected to ground before using.

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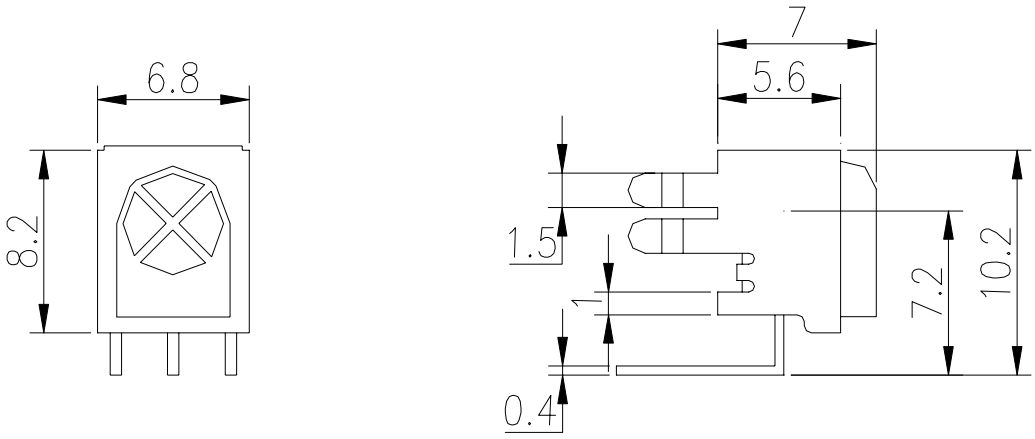
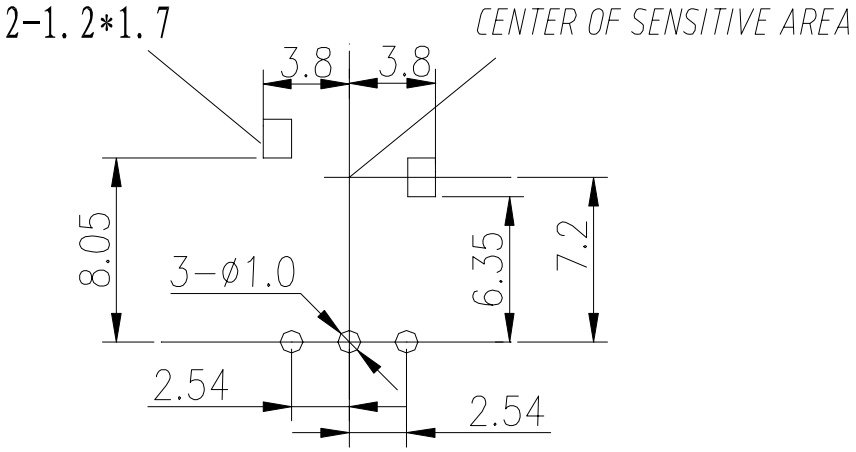


viewed from the solding face



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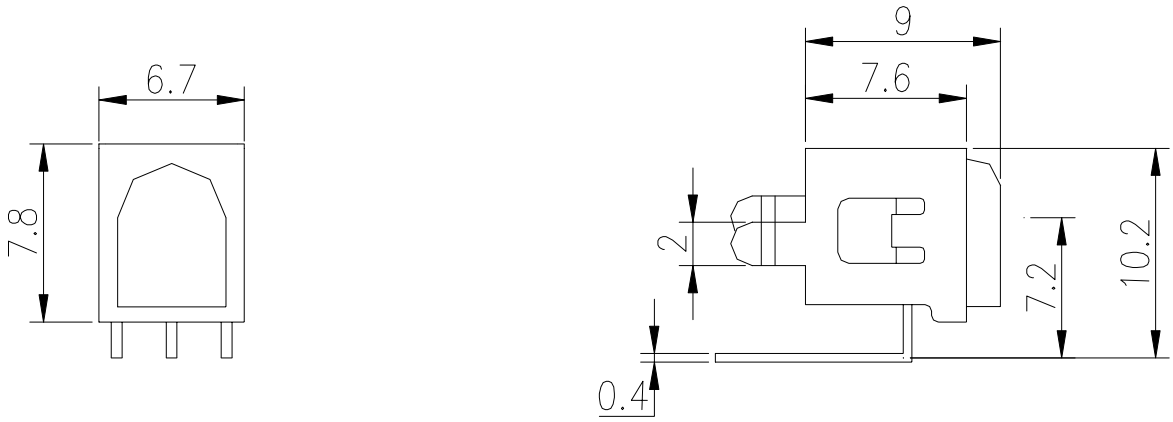
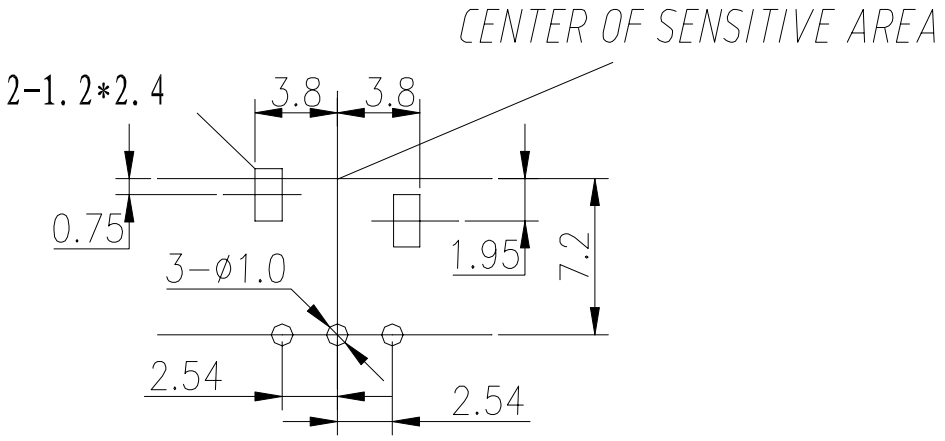


Viewed from the soldering face



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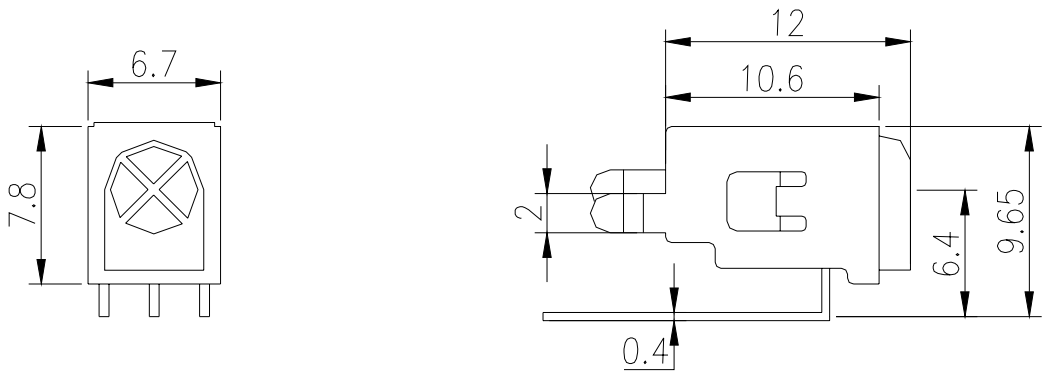
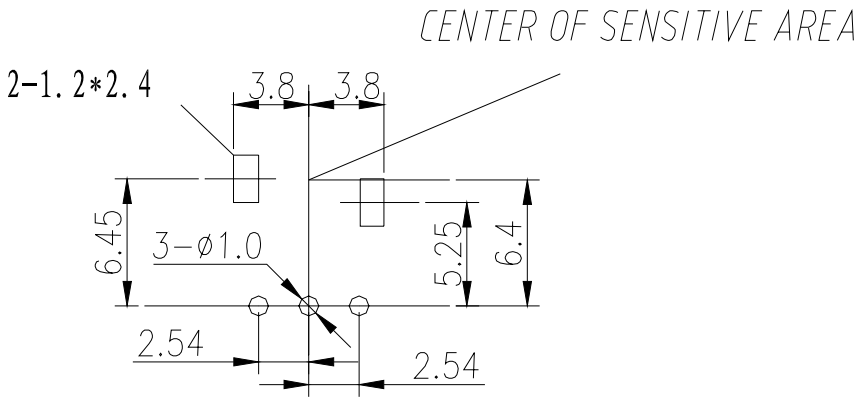


Viewed from the soldering face



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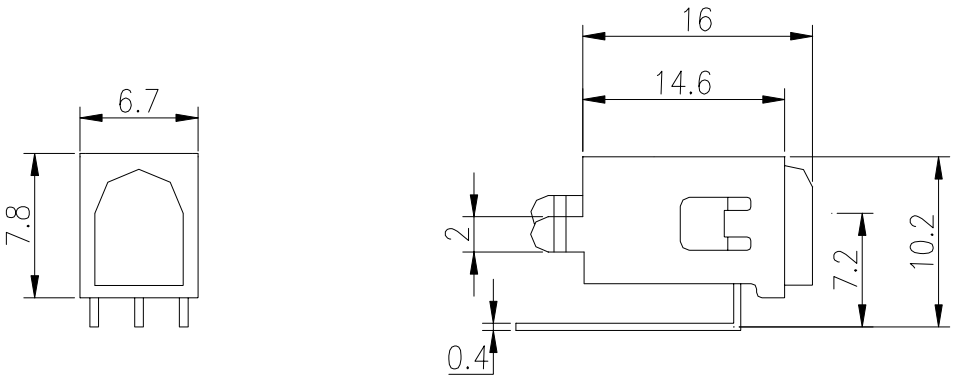

Viewed from the soldering face