

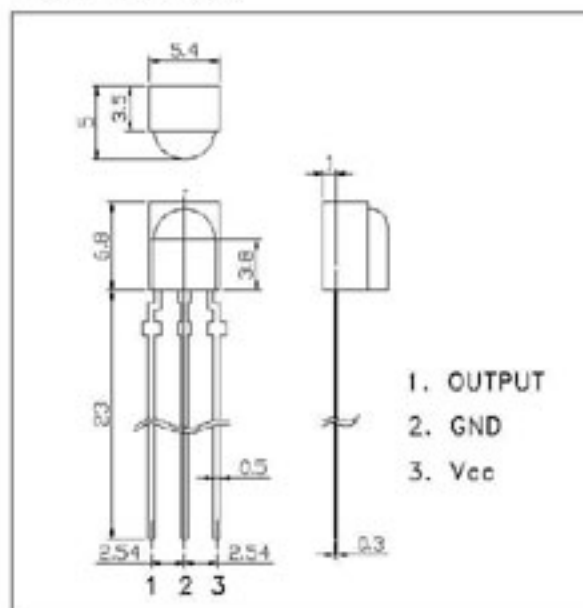
1. Features:

- ✧ 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

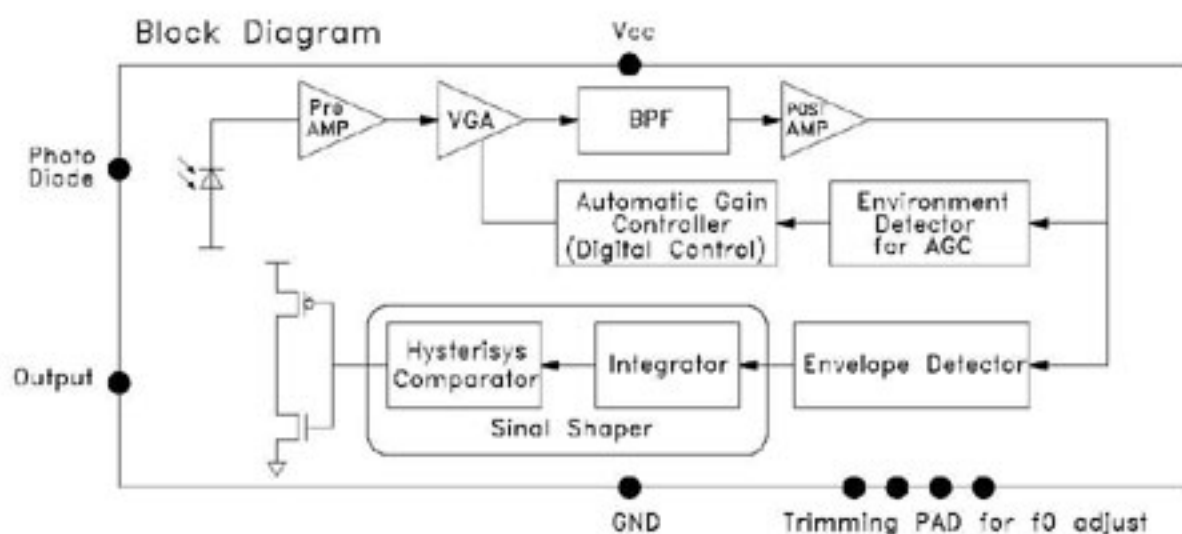
2. Applications

- ✧ AV instruments(Audio, TV, VCR, CD player)
- ✧ Home appliances (Air-conditioner, Fan, Light)
- ✧ Remote control for wireless devices

Dimensions



3. Block Diagram



4. Absolute Maximum Ratings

(Ta=25℃)

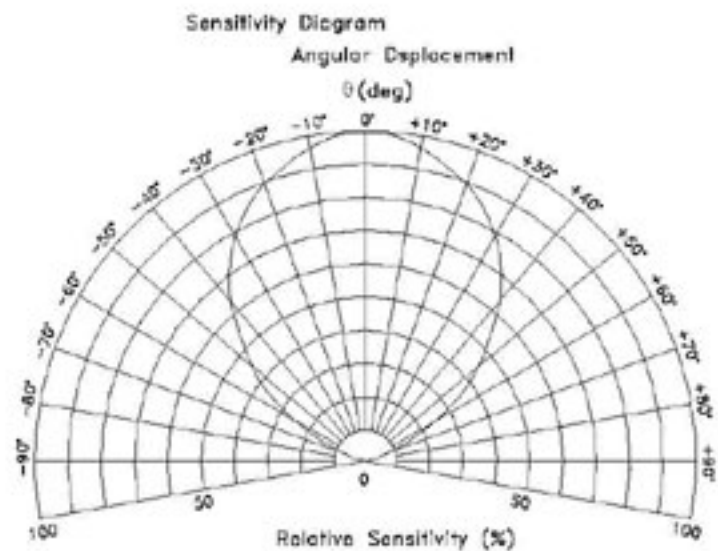
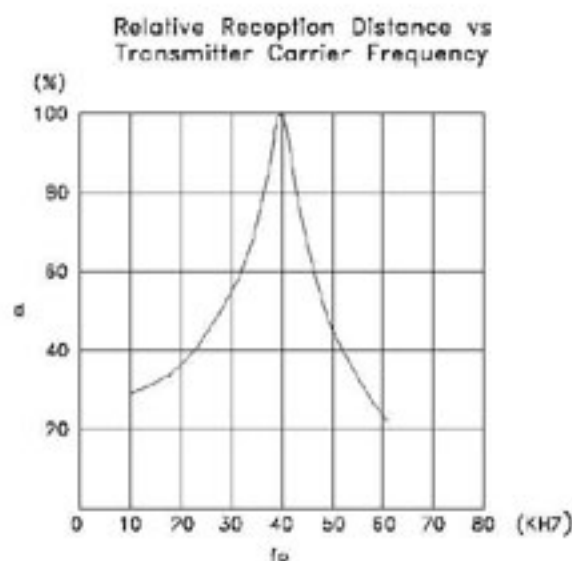
Parameter	Symbol	Ratings	Unit
Supply Voltage	Vcc	6.0	V
Operating Temperature	Topr	-10~+60	℃
Storage Temperature	Tstg	-20~+75	℃
Soldering Temperature*1	Tsol	240	℃

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

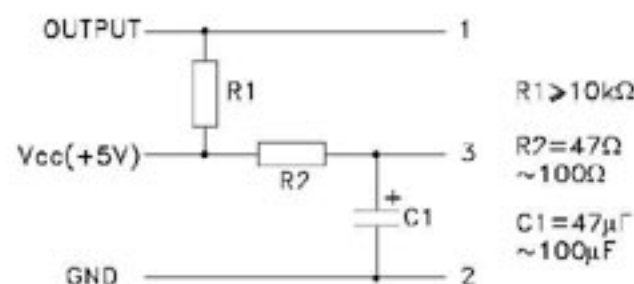
5. Electro-optical Characteristics

(Ta=25°C)

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	$\theta=0^\circ$	15		m
			$\theta=\pm 45^\circ$	8		m
Half Angle	$\Delta\theta$			±45		deg
B.P.F. Center Frequency	Fo			37.9		kHz
Peak Wavelength	λ_p			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=600 μ s	500	600	700	μ s
Low Level Pulse Width	Twl		500	600	700	μ s



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



6. Reliability Test Items

Test Items	Test Conditions	Ratings
High Temperature Storage	$T_a=60^{\circ}\text{C}$, $V_{cc}=5.0\text{V}$	$t=240\text{hr.}$
Low Temperature Storage	$T_a=-10^{\circ}\text{C}$, $V_{cc}=5.0\text{V}$	$t=240\text{hr.}$
High Temperature High Humid Storage	$T_a=40^{\circ}\text{C}$, 90%RH, $V_{cc}=5.0\text{V}$	$t=240\text{hr.}$
Temperature Cycling	-20°C (30min) $\sim$ $+70^{\circ}\text{C}$ (30min)	20 cycles
Soldering Heat	$240\pm 5^{\circ}\text{C}$	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.

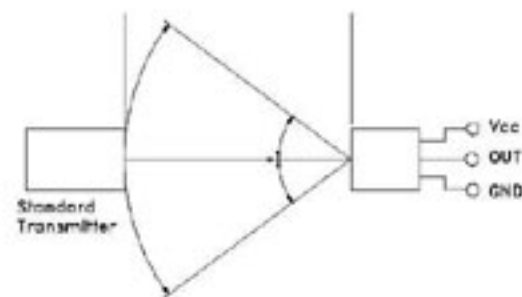


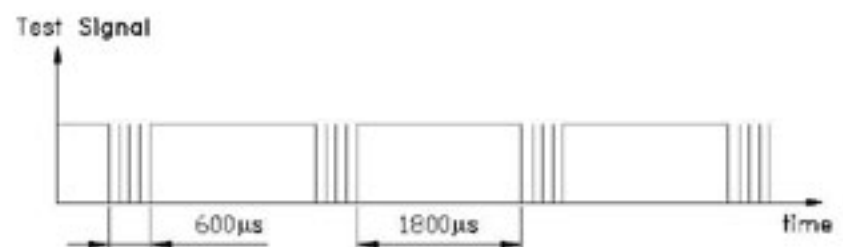
FIG-1

a. Measuring place

Indoor without extreme reflection of light.

b. Ambient light source

Detecting surface illumination is $200\pm 5\text{Lux}$ under ordinary white fluorescence lamp of no high frequency lightning.



$T_{\text{cyc}} - T_d > 25\text{ms}$ is recommended for optimal function

c. Standard transmitter

Transmitter wave indicated in FIG-2 of standard transmitter is arranged to satisfy $V_o \geq 50\text{mVp-p}$ under the measuring circuit specified in FIG-3.

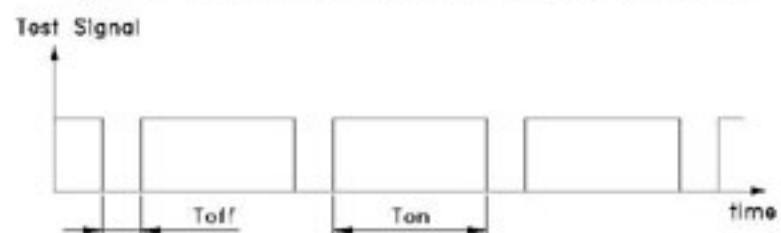


FIG-2

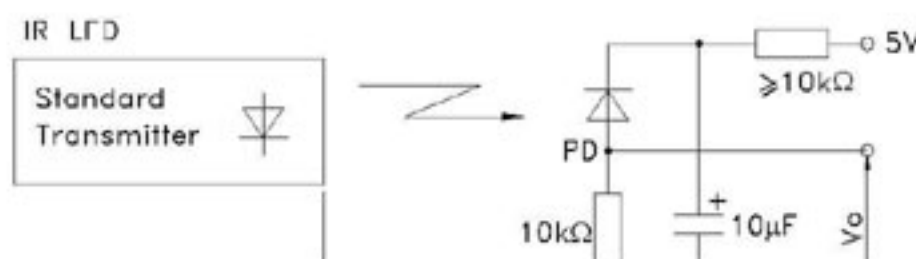


FIG-3 Power output Measurement Circuit