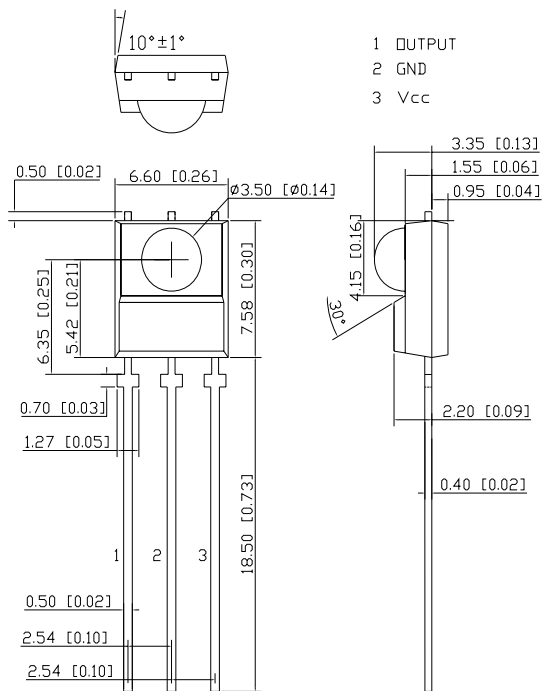


# INFRARED RECEIVER MODULE

## 紅外線接收模組

Part Number: K3800

### Package outlines

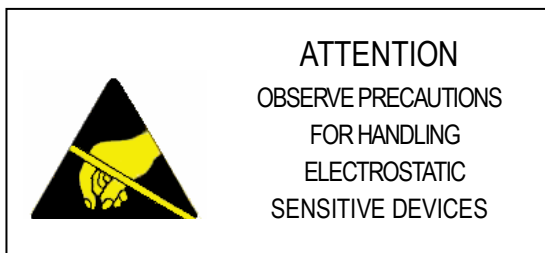


### 1 . Features :

- 1) Miniature size
- 2) Built-in exclusive IC
- 3) Wide half angle long reception distance
- 4) High immunity against ambient light
- 5) High protection ability to EMI
- 6) Supply-voltage Range :2.7V~5.5V

### 2 . Applications :

- 1) AV instruments ( Audio, TV, VCR, CD)
- 2) Home appliances ( Air-conditioner, Fan, Light. )
- 3) Remote control for wireless devices



ITEM	MATERIALS
Resin	Epoxy
Bonding Wire	1.0mil Au
Lens color	Black
Lead frame	Ag plating iron alloy

### NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.25mm (0.01inch) unless otherwise noted.

Rev :	Date	Drawn by :	Checked by :	Approved by :
A				

# INFRARED RECEIVER MODULE

## 紅外線接收模組

Part Number: K3800

### Absolute maximum ratings

( $T_A=25^{\circ}\text{C}$ )

Parameter	Symbol	Value	Unit
Power voltage	Vcc	6.0	V
Operating Temperature	Topr	-20~+60	$^{\circ}\text{C}$
Storage Temperature range	Tstg	-20 ~+80	$^{\circ}\text{C}$
Soldering Temperature	Tsol	260 $^{\circ}\text{C}$ for 5 SEC (5mm [0.20"] from body)	

### Electro-optical characteristics

( $T_A=25^{\circ}\text{C}$ )

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Supply voltage		Vcc	2.7	-	5.5	V
Supply Current	Input Signal=0	Icc	-	-	1.5	mA
Reception Distance	IV=5.0mW Vcc=5.0V (In the Range of 45° cone)	D	6	-	-	m
Half Angle		$\Delta\theta$	-	90	-	deg
B.P.F.Center Frequency		Fo	-	37.9	-	KHZ
Peak Wavelength		$\lambda_p$	-	940	-	nm
High Level Output Voltage		Voh	VDD-0.3	-	-	V
Low Level Output Voltage		Vol	-	-	GND+0.3	V
High Level Pulse Width	Burst Wave =600 $\mu\text{s}$	Twh	400	600	800	$\mu\text{s}$
Low Level Pulse Width		Twl	400	600	800	$\mu\text{s}$

# INFRARED RECEIVER MODULE

## 紅外線接收模組

Part Number: K3800

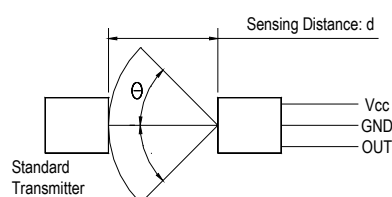
### Reliability Test Items

Test Items	Test Conditions	Note	Number of Damaged
Temperature Cycle	-40°C 30min ↑↓ 85°C 30min	100 cycle	0/22
Thermal Shock	-40°C 15min ↑↓ 100°C 15min	100 cycle	0/22
High Temperature High Humid Storage	T <sub>a</sub> =85±5°C RH=85±10%	1000 hrs	0/22

### Testing Method

Distance between emitter and detector specifies maximum distance that output waveform satisfies the standard under the conditions below against the standard transmitter

FIG-1 : Detection length test



1) Measuring place

Indoor without extreme reflection of light

2) Ambient light source

Detecting surface illumination is 200±5Lux under ordinary white fluorescence lamp of no high frequency lightning

3) Standard transmitter

Transmitter wave indicated in FIG-2 of standard transmitter is arranged to satisfy 400mVpp under the measuring circuit specified in FIG-3.

FIG-2 :

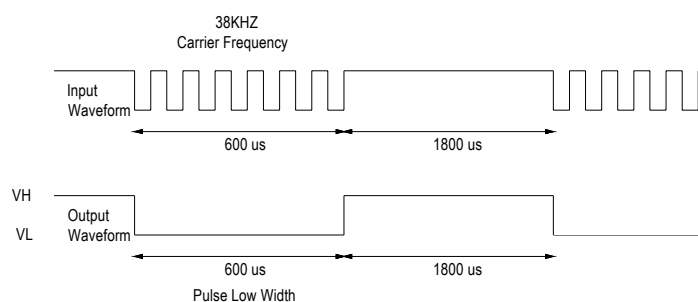
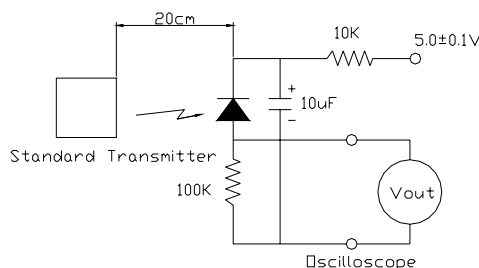


FIG-3 :



### ESD

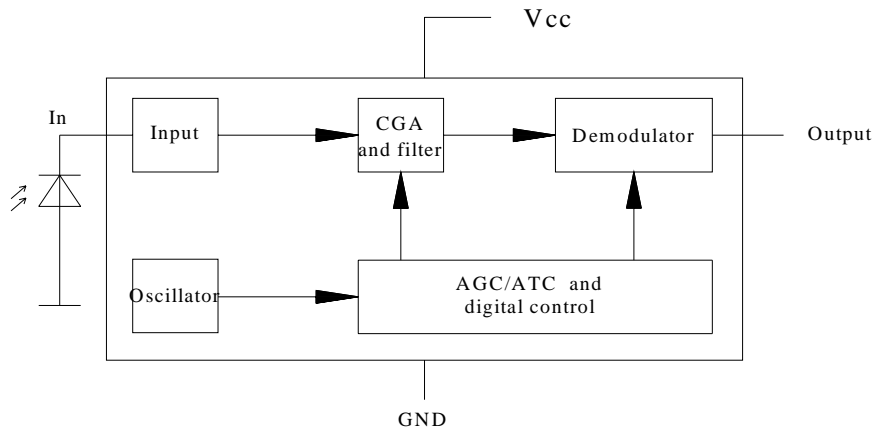
VDD,GND,OUT pins :2000V HBM;200V MM,MIL-STD-883C,Method 3015.7

# INFRARED RECEIVER MODULE

## 紅外線接收模組

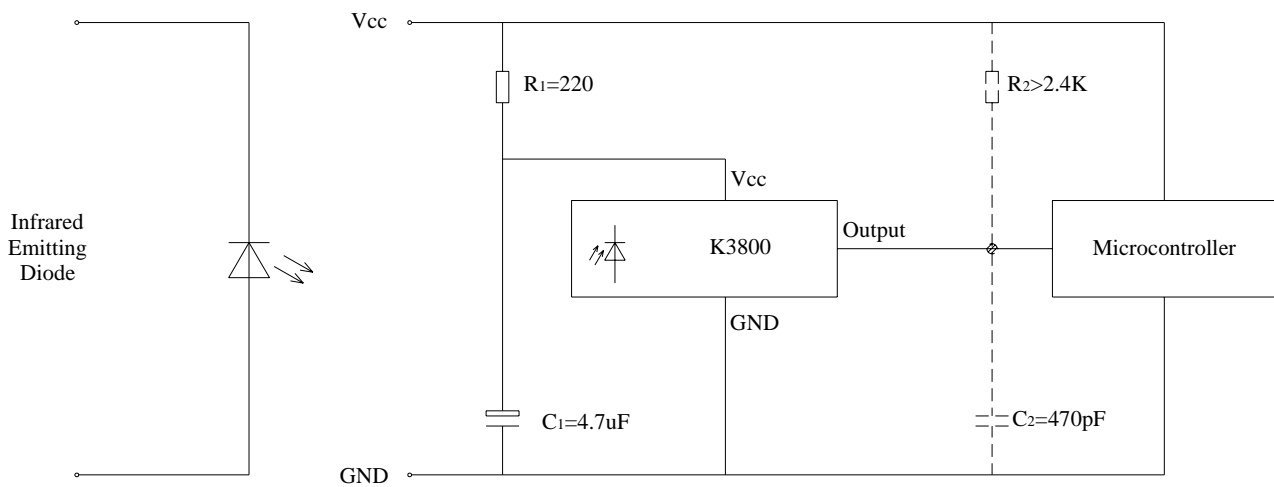
Part Number: K3800

### Block Diagram



### Application Circuit (optional)

Note: Recommended in home appliances. For the better performance, power noise reduction circuit composed of R1 and C1 is recommended.

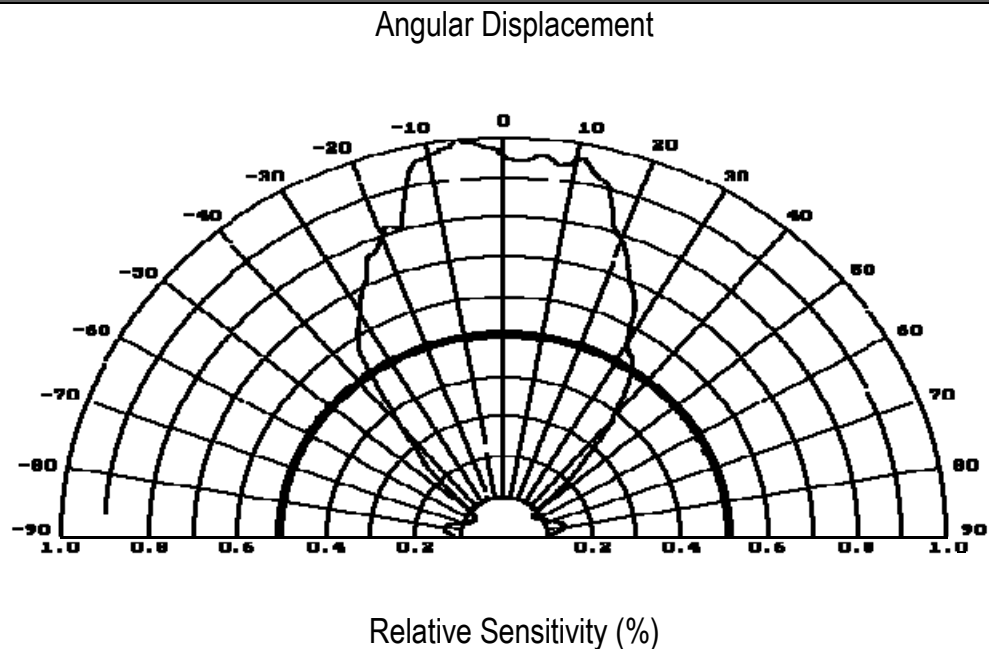


# INFRARED RECEIVER MODULE

## 紅外線接收模組

Part Number: K3800

### Sensitivity Diagram



### Precautions for Use

Note:

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

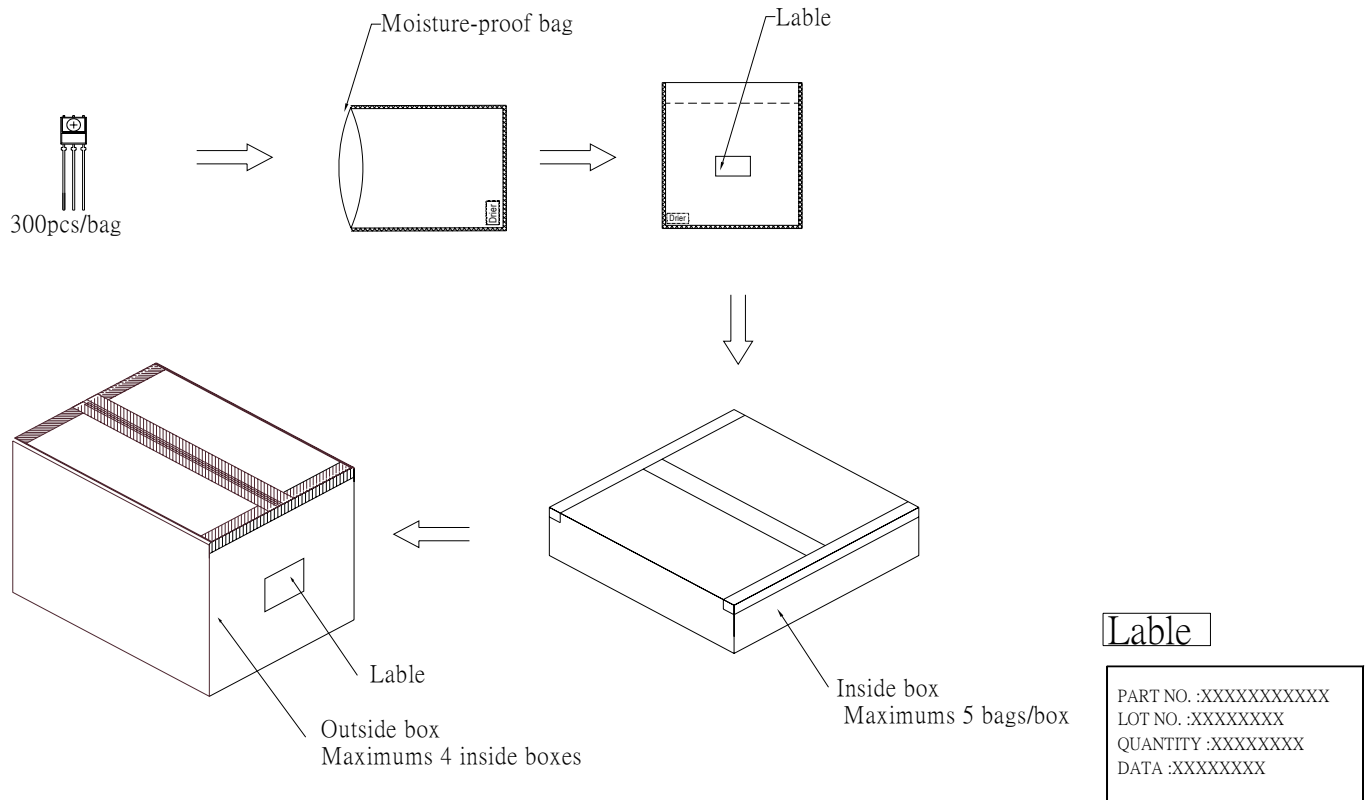
# INFRARED RECEIVER MODULE

## 紅外線接收模組

Part Number: K3800

### IRM Packaging Specifications

- Packaging specifications



#### NOTES:

Products (numbers of products are 300pcs) packed in a seal off moisture-proof bag along with a desiccant one by one, 5 moisture-proof bag of maximums (number of products are 1500pcs) packed in an inside box (size: about 238mm x about194mm x about 102mm) and four inside boxes of maximums(number of products are 6000pcs) are put in the outside box (size: about 410mm x about 254mm x about 229mm) Together with buffer material, and it is packed. (Part No., Lot No., quantity should appear on the label on the moisture-proof bag, part No. And quantity should appear on the label on the cardboard box.) The number of the loading steps of outside box (cardboard box) has it to three steps.