
SPECIFICATION

DESCRIPTION: Pyroelectric Infrared Sensor

Part NO.: PIR200B

Specification

- 1 . Part NO.: PIR200B
- 2 . Usage: Universal big window probe, can be used for automatic lighting automatic door toy into alarming, etc
- 3 . Sensitive type: double type series
- 4 . Size: TO-5 packaging, pls see chart 1.
- 5 . Performance index

5.1

Project	Testing condition	specification
signal output	ambient temperature 25°C blackbody temperature 420K(147°C) modulation frequency 1HZ magnification 72.5 dB (operational amplifier 5000X) Vd= 5V , Rs=47KΩ	≥ 4 Vp-p
Noise	ambient temperature 25°C magnification 72.5 dB (operational amplifier 5000X) Vd= 5V , Rs=47KΩ	<150mVp-p Max. (Typ. 90mVp-p)
degree of balance [*]	blackbody temperature 420K(147°C) magnification 72.5 dB (operational amplifier 5000X) Vd= 5V , Rs=47KΩ	<15%
Mains voltage		3~15V
Source Voltage	Vd= 5V , Rs=47KΩ	0.4~1.1V
response time	Plus electric signal stability after the time required for output	<12S

[*] degree of balance = $V_{AB}/|V_A+V_B| \times 100\%$

V_{AB} = double sensitivity (mVp-p)

V_A = A 'sensitivity (mVp-p)

V_B = B 'sensitivity (mVp-p)

Testing way, pls see chart 2 、 3

5.2 optical property

Project	Specification
View Angle	X : 140 Y : 130 pls see chart 4
Accept wavelength	5.5~14 μ m ; pls see chart 5
cut-off wavelength	5.2 \pm 0.5 μ m ; pls see chart 5
Average transmittance	>72% , 7~14 μ m
Filter materials	silicon
Thickness of filter	0.50mm

5.3 Environmental performance

Project	Specification
Operating temperature	-30—70°C
Storage Temperature	-35—80°C

6. reliability evaluation

test project	Testing condition	tester	Testing standard
high-temperature working	70°C 72 hours	temperature-regulated oven	After the test, put the sensor in the natural environment 3hours, then test electrical performance measurement. 1. appearance no change 2. keep electric performance parameters within 20%
sweat resistance	60°C , 95 % RH , 72 hours	temperature and humidity regulator	
LTST	-40°C 72 hours	temperature-regulated oven	
HTST	70°C 72 hours	temperature-regulated oven	
Thermal shock	-40°C , 1hour→Room Temperature , 1hour→70°C , 1hour 10 \uparrow recycle	temperature-regulated oven	
natural aging	Outside 30days	Test prototype	
soldering resistance	260 \pm 5°C , 10s Dip depth 3.0mm	soldering furnace	

Seal	133.3 pascal, 1minute	vacuum pump	No bubble
------	--------------------------	-------------	-----------

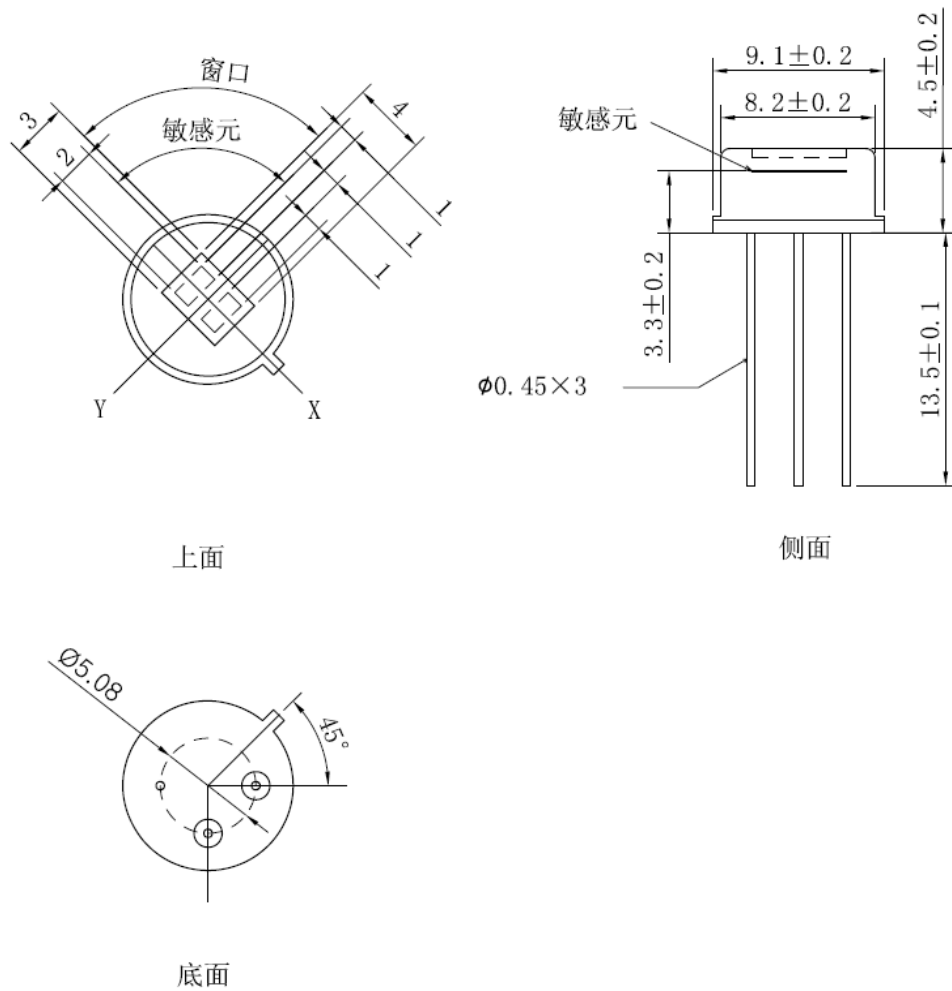
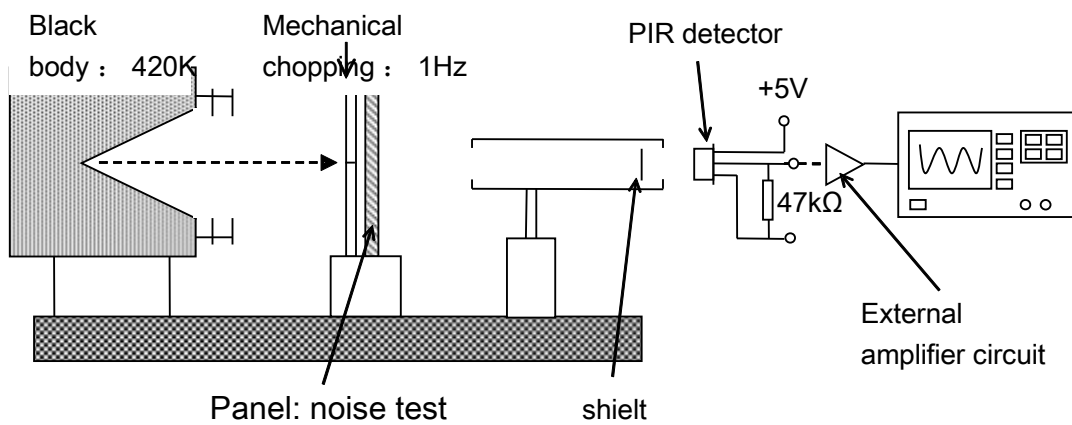


Chart 1.: Specification of the sensor



The distance between black body and PIR sensor : 200mm
 Amplifier circuit : 72.5 dB

Chart 2: Testing Schematic plot

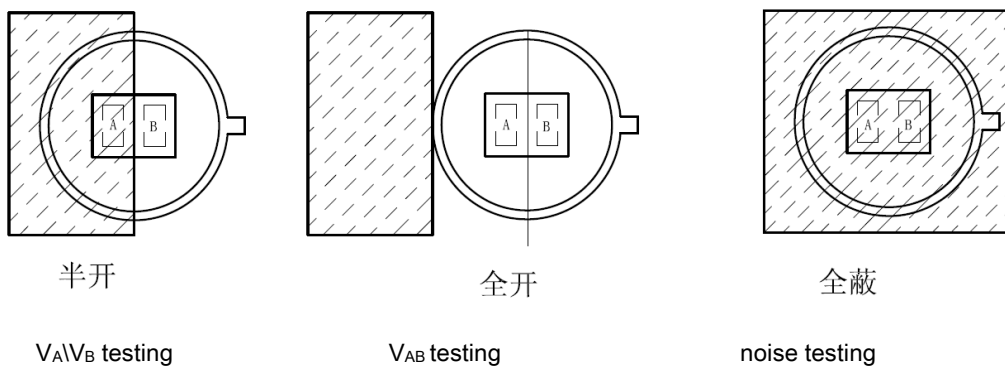


Chart 3. PIR sensor testing Schematic plot

View Angle



Chart 4: View angle testing Schematic plot

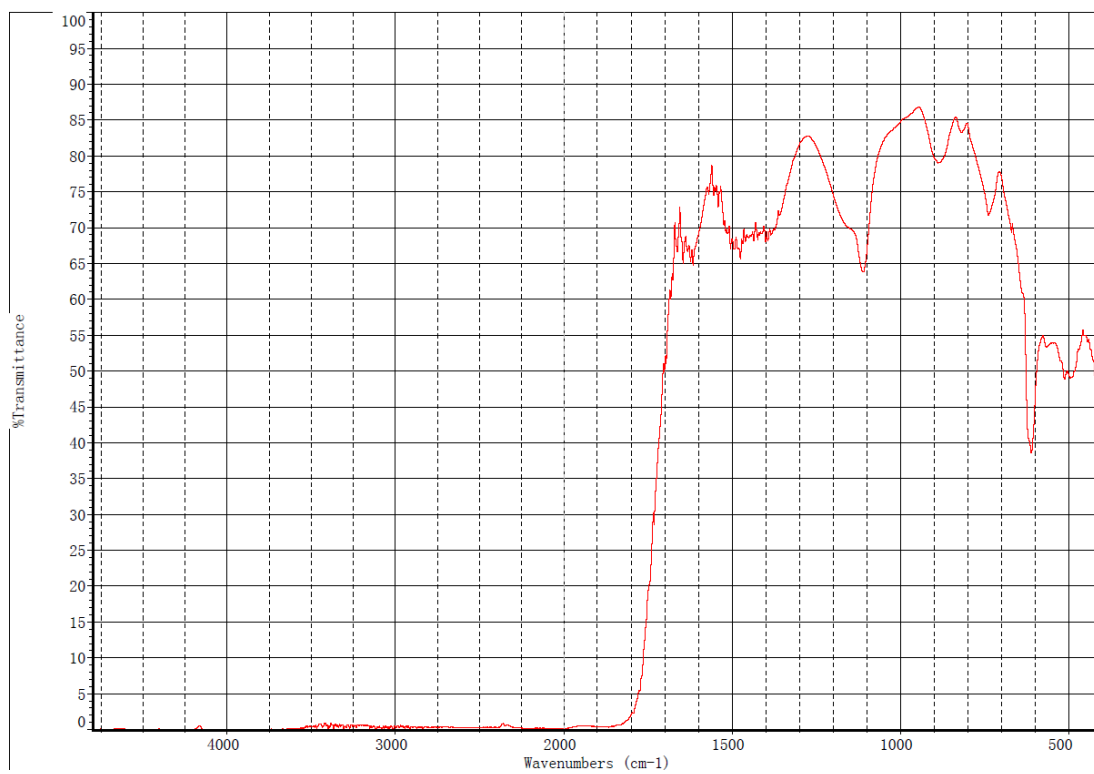


Chart 5: : filter through characteristic curve