

# SPECIFICATION

PYROELECTRIC PASSIVE  
INFRARED SENSOR

MODEL RE200B-P

TYPE: RE200B-P

PAGE: 1 /6

CHART:

EDITION: A

ASSEMBLY:

深圳市晶创和立科技有限公司

## TYPE OF SENSOR

TWIN ELEMENT

## PHYSICAL CONFIGURATION

- |                        |                                |
|------------------------|--------------------------------|
| (1) PACKAGE            | TO-5 METAL CAN<br>SEE FIGURE A |
| (2) ELEMENT SIZE       | 2.0×1.0 mm                     |
| (3) LEAD CONFIGURATION | SEE FIGURE B,C                 |

## ELECTRICAL CHARACTERISTICS (AT 25±5°C)

- |                           |  |
|---------------------------|--|
| (1) CIRCUIT CONFIGURATION | SEE FIGURE D   |
| (2) OPERATION VOLTAGE     | 2.2~15 V DC (Drain-Ground)<br>(Rs: 47K Ω)  |
| (3) SOURCE VOLTAGE        | 0.4~1.1 V (V <sub>D</sub> =10V, Rs=47K Ω)  |
| (4) SIGNAL OUTPUT         | Min 2.5 V <sub>p-p</sub> (Source-Ground)<br>(BLACK BODY 420K; CHOPPER<br>FREQUENCY 1Hz: MEASUREMENT<br>AMP. 0.3~3.0Hz、 72.5db(AT 1Hz))<br>SEE FIGURE F |
| (5) BALANCE OUTPUT        | Max 20% (Source-Ground)<br>(BLACK BODY 420K; CHOPPER<br>FREQUENCY 1Hz: MEASUREMENT<br>AMP. 0.3~3.0Hz、 72.5db(AT 1Hz))<br>SEE FIGURE G                  |
| (6) NOISE OUTPUT          | Max 200 mV (Source-Ground)<br>(MEASUREMENT AMP. 0.3~3.0Hz、<br>72.5db(AT 1Hz))<br>SEE FIGURE H  |

TYPE: RE200B-P

PAGE: 2/6

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## OPTICAL CHARACTERISTICS

- |                     |  |
|---------------------|--|
| (1) FIELD OF VIEW   | 138° × 125°<br>SEE FIGURE I  |
| (2) WINDOW MATERIAL | Si Filter Cuton WL 5.0 ± 0.5 μ m<br>Thickness 0.5mm<br>Average T > 75%<br>Pass Band 5.0 ~ 14 μ m |

## ENVIRONMENTAL REQUIREMENTS

- |                           |              |
|---------------------------|--------------|
| (1) OPERATING TEMPERATURE | -20 ~ +50 °C |
| (2) STORAGE TEMPERATURE   | -30 ~ +60 °C |

### ※ NOTES

#### 1. DESIGN RESTRICTIONS/PRECAUTIONS

FOR OUTDOOR APPLICATIONS, BE SURE TO APPLY SUITABLE SUPPLEMENTARY OPTICAL FILTER AND DRIP-PROOF. ANTI-DEW CONSTRUCTION. THIS SENSOR IS DESIGNED FOR INDOOR USE. IN CASES WHERE SECONDARY ACCIDENTS DUE TO OPERATION FAILURE OR MALFUNCTIONS CAN BE ANTICIPATED. ADD A FAIL SAFE FUNCTION TO THE DESIGN.

#### 2. USAGE RESTRICTIONS/PRECAUTIONS

TO PREVENT SENSOR MALFUNCTIONS, OPERATIONAL FAILURE OR ANY DETERIORATION OF ITS CHARACTERISTICS. DO NOT USE THIS SENSOR IN FOLLOWING, OR SIMILAR, CONDITIONS.

- A. IN RAPID ENVIRONMENTAL TEMPERATURE CHANGES.
- B. IN STRONG SHOCK OR VIBRATION.
- C. IN A PLACE WHERE THERE ARE OBSTRUCTING MATERIALS (GLASS, FOG, ETC) THROUGH WHICH INFRARED RAYS CANNOT PASS WITHIN DETECTION AREA.
- D. IN FLUID, CORROSIVE GASES AND SEA BREEZE.

TYPE: RE200B-P

PAGE: 3 / 6

CHART:

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- E. CONTINUAL USE IN HIGH HUMIDITY ATMOSPHERE.
- F. EXPOSED TO DIRECT SUN LIGHT OR HEADLIGHTS OF AUTOMOBILES.
- G. EXPOSED TO DIRECT WIND FROM A HEATER OR AIR CONDITIONS.

3. ASSEMBLY RESTRICTIONS/PRECAUTIONS

SOLDERING-----

- A. USE SOLDERING IRONS WHEN SOLDERING.
- B. AVOID KEEPING PINS OF THIS HOT FOR A LONG TIME AS EXCESSIVE HEAT MAY CAUSE DETERIORATION OF ITS QUALITY.(E.G. WITHIN 5 SEC. AT 350°C)
- C. AVOID STATIC ELECTRICITYOR STRONG ELECTROMAGNETIC WAVES.

WASHING-----

- A. BE SURE TO WASH OUT ALL FLUX AFTER SOLDERING AS RENAINDER MAY CAUSE MALFUNCTIONS.
- B. USE A BRUSH WHEN WASHING.WASHING WITH AN ULTRASONIC CLEANER MAY CAUSE OPERATIONAL FAILURE.

4.HANDLING AND STORAGE RESTRICTIONS/PRECAUTIONS

TO PREVENT SENSOR MALFUNCTIONS, OPERATIONAL FAILURE. APPEARANCE DAMAGE OR ANY DETERIORATION OF ITS CHARACTERISTICS. DO NOT EXPOSE THIS SENSOR TO THE FOLLOWING OR SIMILAR, HANDLING AND STORAGE CONDITIONS.

- A. VIBRATION FOR A LONG TIME.
- B. STRONG SHOCK.
- C. STATIC ELECTRICITYOR STRONG ELECTROMAGNETIC WAVES.
- D. HIGH TEMPERATURE AND HUMIDITY FOR A LONG TIME.
- E. CORROSIVE GASES OR SEA BREEZE.
- F. DIRTY AND DUSTY ENVIRONMENTS THAT MAY CONTAMINATE THE OPTICAL WINDOWS.

SENSOR TROUBLES RESULTING FROM MISUSE. INAPPROPRIATE HANDLING OR STORAGE ARE NOT THE MANUFACTURER ' S RESPONSIBILITY.

TYPE: RE200B-P

PAGE: 4 /6

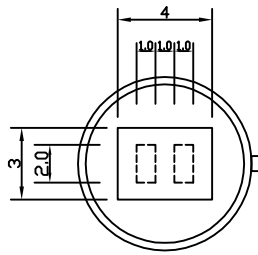
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EDITION: A

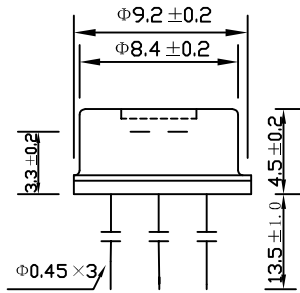
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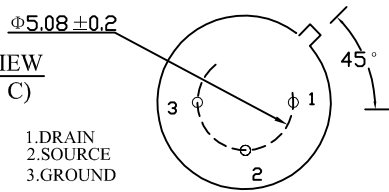
TOP VIEW  
(FIGURE A)



SIDE VIEW  
(FIGURE B)

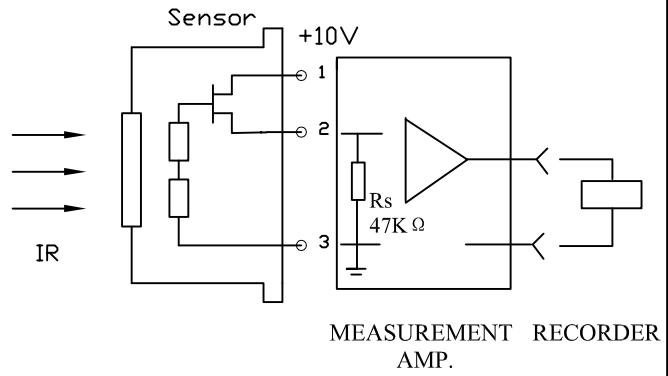


BASE VIEW  
(FIGURE C)



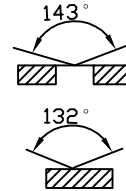
- 1.DRAIN
- 2.SOURCE
- 3.GROUND

CIRCUIT CONFIGURATION  
(FIGURE D)



MEASUREMENT RECORDER  
AMP.

FIELD OF VIEW  
(FIGURE I)



TYPE: RE200B-P

PAGE: 5/6

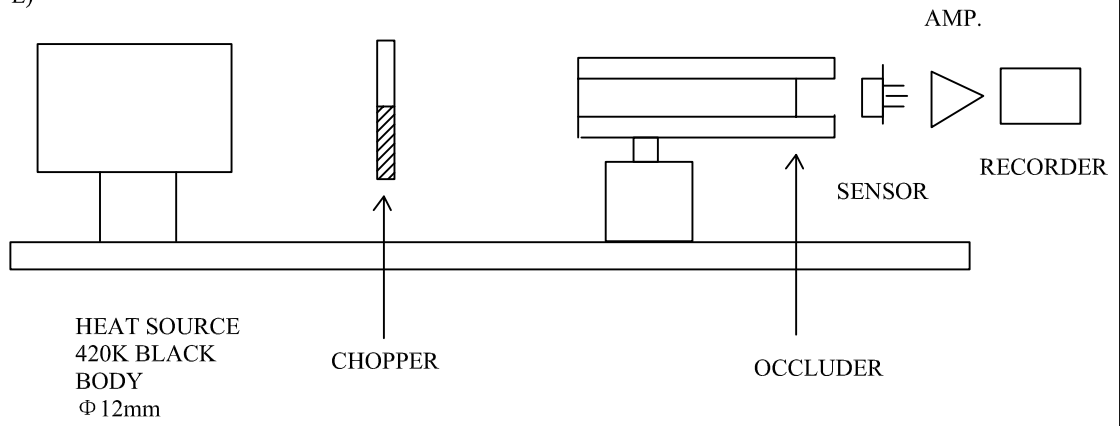
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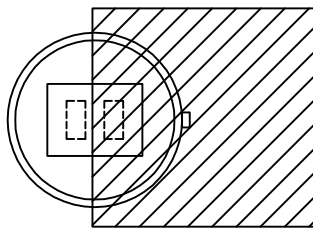
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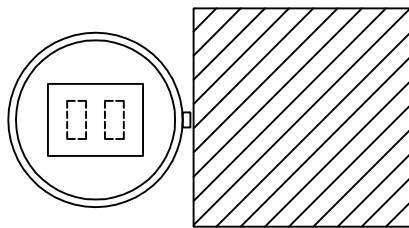
TEST DIAGRAM  
(FIGURE E)



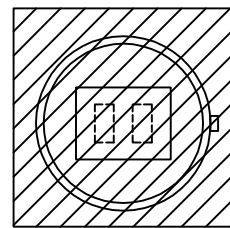
OCCLUDER POSITION



SIGNAL OUTPUT  
(FIGURE F)



BALANCE OUTPUT  
(FIGURE G)



NOISE OUTPUT  
(FIGURE H)

TYPE: RE200B-P

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