

SPECIFICATION

PYROELECTRIC PASSIVE
INFRARED SENSOR

MODEL PMS11-P

TYPE: PMS11-P

PAGE: 1 /6

CHART:

EDITION: A

ASSEMBLY:

SHANGHAI NICERA SENSOR CO.,LTD

TYPE OF SENSOR

SINGLE ELEMENT

PHYSICAL CONFIGURATION

- (1) PACKAGE TO-5 METAL CAN
SEE FIGURE A
- (2) ELEMENT SIZE $\Phi 1.8$ mm
- (3) LEAD CONFIGURATION SEE FIGURE B,C

ELECTRICAL CHARACTERISTICS (AT $25\pm 5^{\circ}\text{C}$)

- (1) CIRCUIT CONFIGURATION SEE FIGURE D
- (2) OPERATION VOLTAGE 2.2~15 V DC (Drain-Ground)
($R_s: 47\text{K}\Omega$)
- (3) SOURCE VOLTAGE 0.4~1.1 V ($V_D=10\text{V}, R_s=47\text{K}\Omega$)
- (4) SIGNAL OUTPUT Min 2.0 Vp-p (Source-Ground)
(FIRE TEMPERATURE
CHOPPER FREQUENCY 1Hz:
MEASUREMENT AMP. 0.3~3.0Hz、
72.5db(AT 1Hz))
SEE FIGURE F

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OPTICAL CHARACTERISTICS

- (1) FIELD OF VIEW 88 °
SEE FIGURE G
- (2) WINDOW MATERIAL White Gem
Wave Length_{p-p} 4.35 μ m
Half Width 180nm
Thickness 0.39 mm

ENVIRONMENTAL REQUIREMENTS

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

APPLICATION

FIRE DETECTION

※ 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 SECONDRAY ACCIDENTS DEE 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.FOGETC) THROUGH WHICH INFRARED RAYS CANNOT PASS WITHIN DETECTION AREA.
- D. IN FLUID. CORROSIVE GASES AND SEA BREEZE.

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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 ELECTRICITY OR STRONG ELECTROMAGNETIC WAVES.

WASHING-----

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

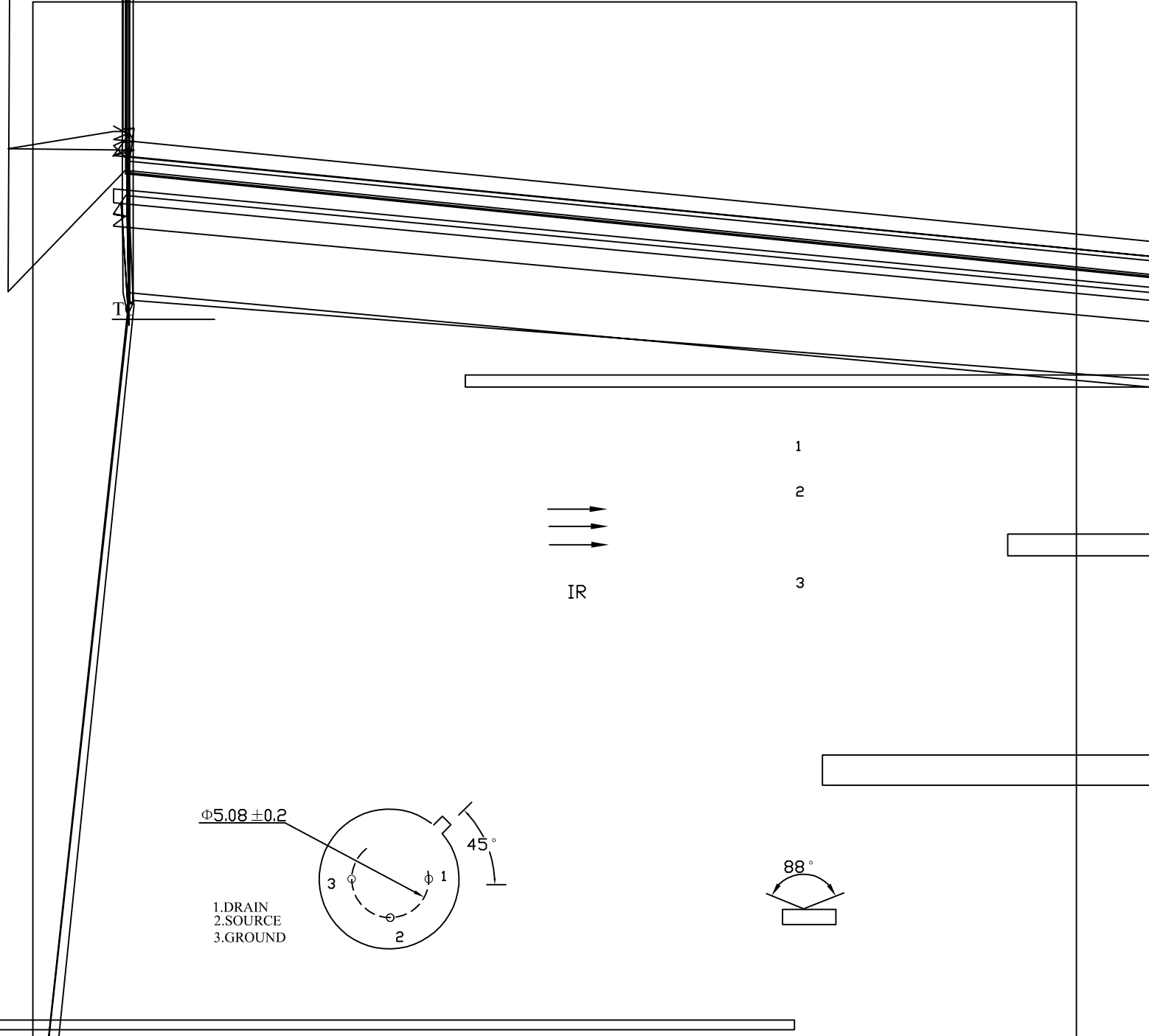
4. HANDLING AND STORAGE RESTRICTIONS/PRECAUTIONS

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 ELECTRICITY OR 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.

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$\Phi 5.08 \pm 0.2$

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

IR

1
2
3

88°

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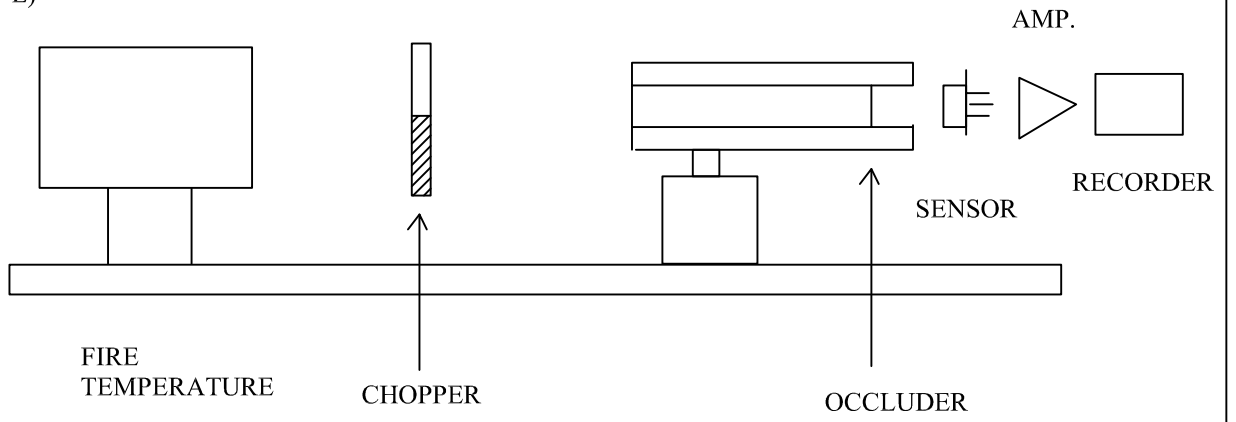
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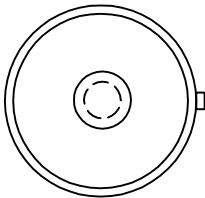
ASSEMBLY:

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TEST DIAGRAM
(FIGURE E)



OCCLUDER POSITION



SIGNAL OUTPUT
(FIGURE F)

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