

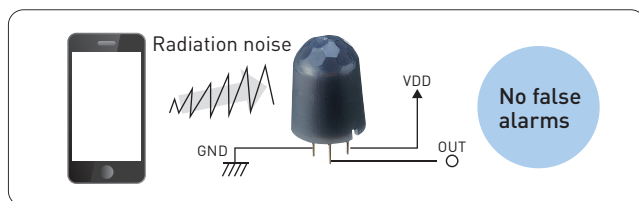
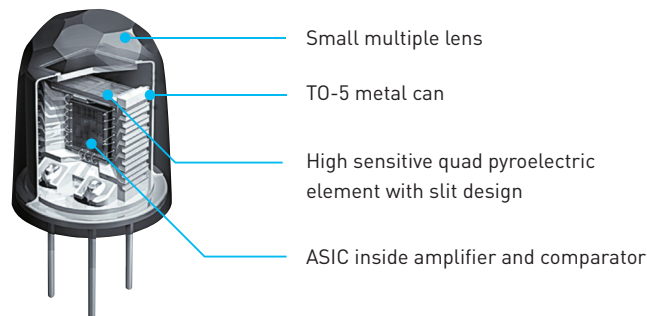
Unique design to satisfy market demand

The PIR Motion sensors from Panasonic offer crucial advantages over conventional PIR Motion sensors.

The unique design concept (explained below) ranges from the production of the pyroelectric sensing devices to the internal signal processing, thus guaranteeing an optimal detection capability and high reliability.

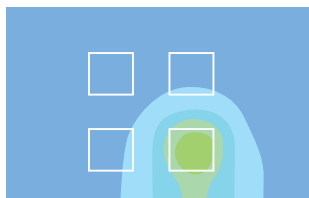
Easy design-in, save design costs by excellent radiation noise resistance

The integrated amplifier /comparator circuit inside a TO-5 metal can (digital type) prevent interferences caused by electromagnetic fields, such as those generated by cell phones and wireless devices. A special differential circuit design is introduced for the EKMB 6 μ A type for applications where a high noise resistance is required (up to GHz range).

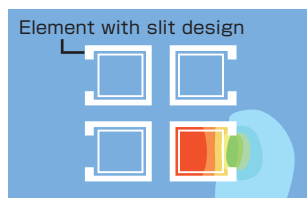


Better sensitivity (approx. 2 times better)

The sensitivity has been significantly improved thanks to a unique slit design of the pyroelectric elements. The separated sensing areas prevent thermal crosstalk between the single sensing elements. Therefore, reliable detection is possible even if the temperature difference between the background (e.g. floor /wall) and the target object (human) is small. (e.g. $\Delta T=4\text{degC}$)



Temperature distribution of conventional pyroelectric sensors without slit



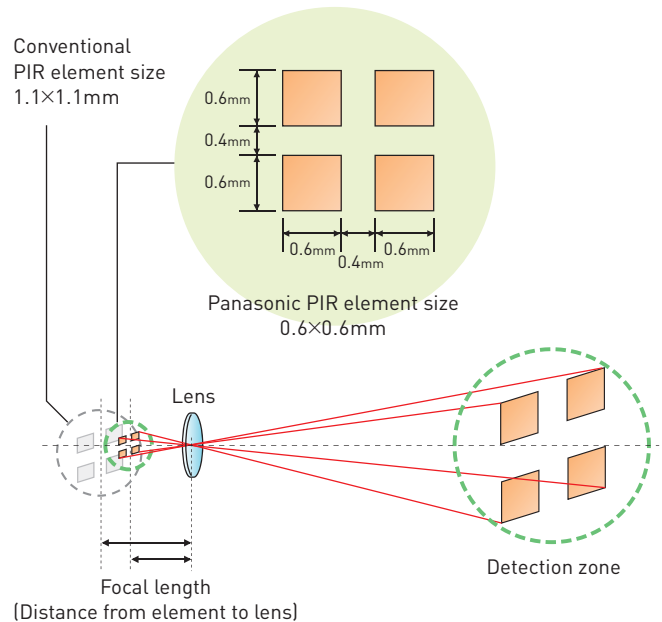
Temperature distribution of Panasonic's pyroelectric infrared sensor for detection of humans

Lead-free pyroelectric element

A ferroelectric LiTaO₃ single lead-free crystal is used as the pyroelectric element for Panasonic PIR Motion sensors. Conventional PIR Motion sensors normally use a ceramic base material (e.g. PZT) for the pyroelectric element, which contains lead in many cases.

Small and fancy lens design

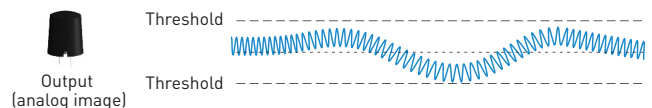
A smaller lens size can be used thanks to the special design of the small pyroelectric elements.



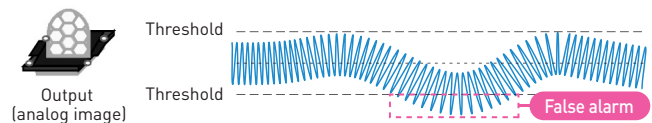
Better signal-to-noise ratio (min.4 times better)

Improved signal-to-noise ratio thanks to a special I/V circuit which is used for converting a current signal from the pyroelectric element to voltage. Panasonic PIR Motion sensors perform by the feedback capacitor and the operational amplifier, different from the conventional FET-type, thereby decreasing the probability of false alarms due to temperature fluctuation.

[PaPIRs] High S/N (= smaller steady noise)



[Conventional Type] Low S/N (=bigger steady noise)



Low current consumption < EKMB(WL) series only >

Reduction of current consumption (1, 2 or 6 μ A) thanks to the special circuit design technology allows battery life to be extended for battery-driven products including wireless devices etc.

Extensive line-up to satisfy a variety of applications

Please choose based on your application and/or environmental requirement

(((PaPIRs))) motion sensor

EKMB(WL)series

- Low current consumption for battery-driven applications
- A special differential input circuit design is introduced for the EKMB 6 μ A type for applications where a high noise resistance is required (up to GHz range)

► Choose by the lens

Lenses for the EKMB/ EKMC series



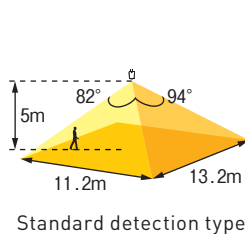
Standard detection type



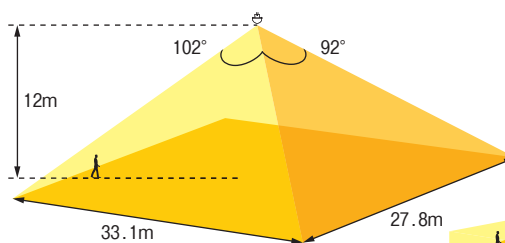
Long distance detection type



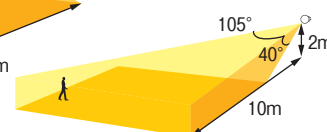
Wall installation type



Standard detection type



Long distance detection type



Wall installation type



Standard detection type



Long distance detection type



Wall installation type

► Choose by the current consumption in standby mode (1 μ A type : in sleep mode)

1 μ A

2 μ A

6 μ A

1 μ A

2 μ A

6 μ A

1 μ A

2 μ A

6 μ A

► Choose by output

Digital

► Choose by lens color

White

EKMB1101111

EKMB1201111

EKMB1301111K

EKMB1103111

EKMB1203111

EKMB1303111K

EKMB1104111

EKMB1204111

EKMB1304111K

Black

EKMB1101112

EKMB1201112

EKMB1301112K

EKMB1103112

EKMB1203112

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EKMB1104112

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Pearl white

EKMB1101113

EKMB1201113

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