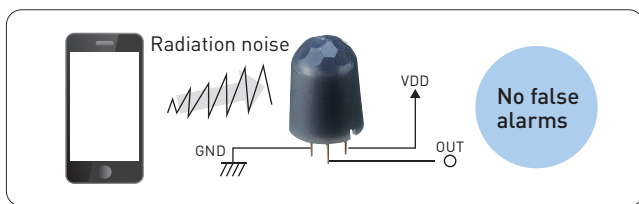
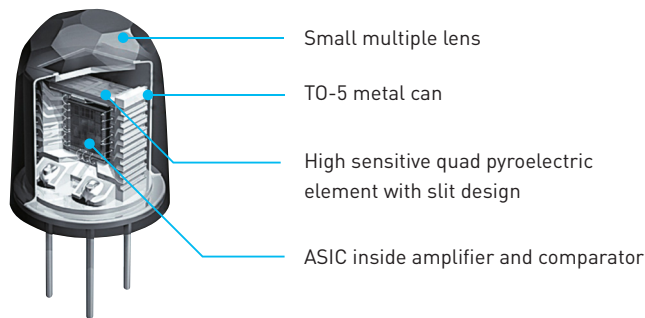


# Unique design to satisfy market demand

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.

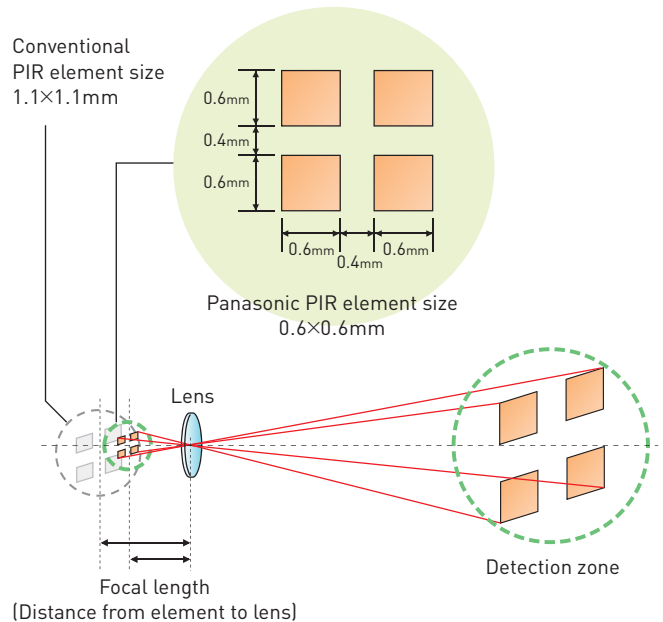
## Easy design-in, save design costs by excellent radiation noise resistance

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 6μA type for applications where a high noise resistance is required (up to GHz range).



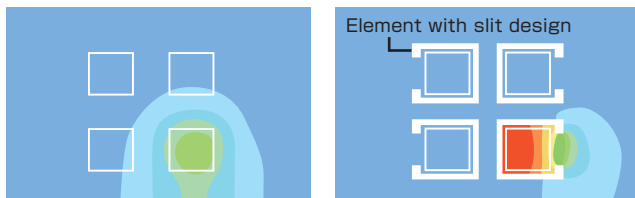
## Small and fancy lens design

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



## 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.  $\Delta T = 4 \text{ degC}$ ).



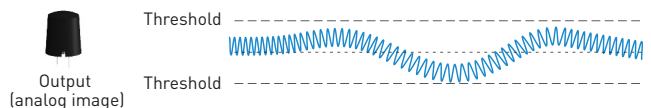
Temperature distribution of conventional pyroelectric sensors without slit

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

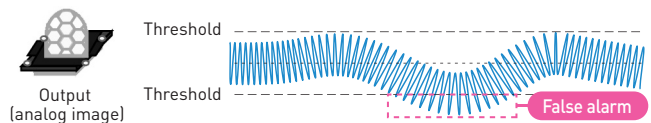
## Better signal-to-noise ratio (min.4 times better)

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)



## Lead-free pyroelectric element

A ferroelectric LiTaO<sub>3</sub> 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.

## Low current consumption (EKMB(WL) series only)

Reduction of current consumption (1, 2 or 6μA) 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 $\mu$ 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



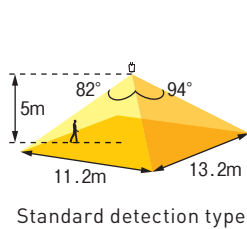
Standard detection type



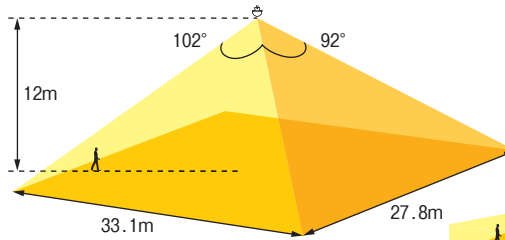
Long distance detection type



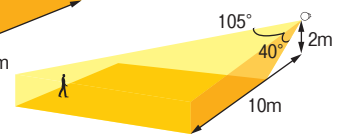
Wall installation type



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 $\mu$ A type : in sleep mode)

1 $\mu$ A

2 $\mu$ A

6 $\mu$ A

1 $\mu$ A

2 $\mu$ A

6 $\mu$ A

1 $\mu$ A

2 $\mu$ A

6 $\mu$ 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 EKMB1303112K EKMB1104112 EKMB1204112 EKMB1304112K

Pearl white

EKMB1101113 EKMB1201113 EKMB1301113K EKMB1103113 EKMB1203113 EKMB1303113K EKMB1104113 EKMB1204113 EKMB1304113K

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