



(W)  
White



(B)  
Black



(PW)  
Pearl White

Standard Detection - 5m



(W)  
White



(B)  
Black



(PW)  
Pearl White

Long Distance Detection - 12m

**FEATURES**

**1μA low current consumption with Panasonic's proprietary design**

Development of a specialized circuit allows the reduction of current consumption to 1 μA (during sleep mode). When motion is detected, the sensor will shift to "stand-by" mode.

Reduction of current consumption allows battery life to be extended for battery driven products, including wireless based and low power consumption devices. (Product lineup includes 1 μA, 2 μA, and 6 μA sensors.)

**Simplified circuitry with fully integrated sensor design**

Panasonic's proprietary high-density embedded circuit design eliminates external sensing circuits. Advantages include reduced development and design schedules.

**Robust design prevents false detection**

PaPIRS sensing circuits are enclosed in a metallic can to minimize adverse effects of external electromagnetic fields. Examples include radiated noise caused by cellular phones.

A high S/N ratio minimizes sensitivity to false tripping when operated under various environmental conditions.

**Low curvature lens for product designs**

Panasonic's lens formation technology achieves a semi-flat lens with a smooth surface and minimum protrusion from the device (lens diameter: φ9.5mm).

In addition to white and black lens options, pearl white is offered for design aesthetics.

(※Refer to "Dimensions" on page 5)

**Lead-free pyroelectric elements**

PaPIRS sensing elements contain lithium tantalate and are lead-free. Typical PIR sensing elements are ferroelectric ceramic (PZT) containing lead.

**APPLICATIONS**

**Security Equipment:**

- Wireless security sensors, and cameras

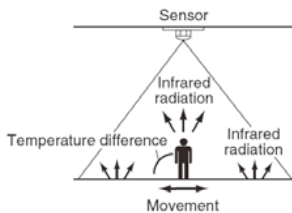
**Wireless Devices / Mobile Equipment:**

- Wireless occupancy sensors (powered by PV cells or battery)
- PC and smart phone
- Commercial & Residential Lighting Fixtures
- Video Intercoms
- Vending Machines
- Home Automation

**What is passive infrared type?**

This sensor detects changes in infrared radiation that occur when there is movement by a person (or object) which is different in temperature from the surroundings.

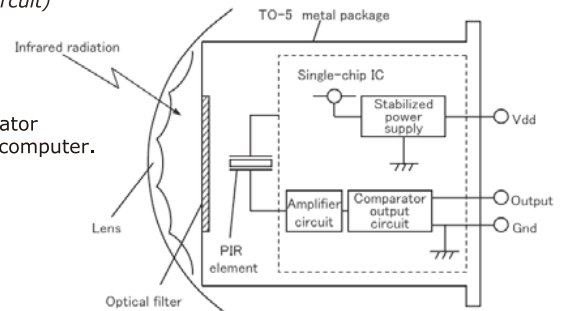
- 1 As this sensor detects temperature differences, it is well suited to detecting the motion of people by their body temperature.
- 2 Wide sensing area.



**Compliance with RoHS Directive**

**Block Diagram (Digital output circuit)**

Built-in amplifier and comparator connected directly to a microcomputer.



EKMB

Output: **1:** Digital

Current Consumption: **1:** 1 μA, **2:** 2 μA, **3:** 6 μA

Detection Performance: **01:** Standard Detection: 5m  
**03:** Long Distance Detection: 12m

Lens Color:  
**1:** White **2:** Black **3:** Pearl White

Lens Material: **1:** Polyethylene

Mounting: **1:** TO-5

**PRODUCT TYPES**

Detection Performance	Current Consumption	Lens Color	Model No.	Inner Package	Outer Package
Standard Detection 5m	1 $\mu$ A	White	EKMB1101111	50pcs	1000pcs
		Black	EKMB1101112		
		Pearl White	EKMB1101113		
	2 $\mu$ A	White	EKMB1201111		
		Black	EKMB1201112		
		Pearl White	EKMB1201113		
	6 $\mu$ A	White	EKMB1301111		
		Black	EKMB1301112		
		Pearl White	EKMB1301113		
Long Distance Detection 12m	1 $\mu$ A	White	EKMB1103111	50pcs	1000pcs
		Black	EKMB1103112		
		Pearl White	EKMB1103113		
	2 $\mu$ A	White	EKMB1203111		
		Black	EKMB1203112		
		Pearl White	EKMB1203113		
	6 $\mu$ A	White	EKMB1303111		
		Black	EKMB1303112		
		Pearl White	EKMB1303113		

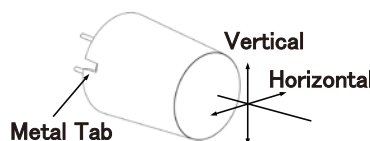
**PRODUCT TYPES**

**1. Detection Performance** [Conditions for measuring: Ambient temperature: 25°C(77°F) Operating voltage: 3VDC]

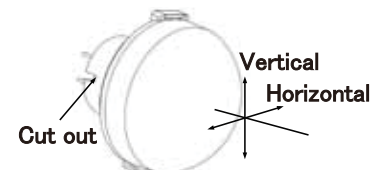
Items		Standard Detection 5m	Long Distance Detection - 12m	Conditions concerning target
Detection Range *1)		Max. 5m	Max. 12m	1. The temperature difference between the target and the surroundings should be superior to 4°C (7.2°F). 2. Movement speed: 1.0m/s 3. Target concept is human body (Size: 700 × 250mm)
Detection Area	Horizontal *2)	94° (±47°)	102° (±51°)	
	Vertical *2)	82° (±41°)	92° (±46°)	
Detection Zone *3)		64 zones	92 zones	

\*1) Depending on the target's speed and temperature difference compared to the surroundings, detection can occur at a range superior to the above value. Please use this sensor according to the specifications for guaranteed performance.

\*2) Definitions for "Horizontal" and "Vertical"



Standard detection type



Long Distance detection type

\*3) Refer to the "detection area" diagram on P.4.