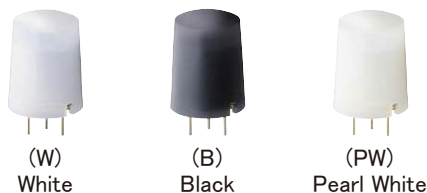


(Standard detection type)



(Long distance detection type)



1. 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.

2. 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. In addition to white and black lens options, pearl white is offered for design aesthetics. (*Refer to "Dimensions" on page 5)

3. Robust design prevents false detection

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

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

4. 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

Commercial / Residential Equipment

- Lighting fixtures, Sensor switches,
- Video intercoms, Vending machines,
- Home automation control panels

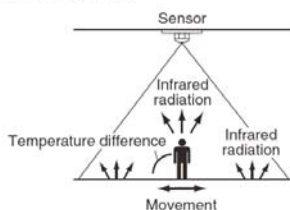
Home Appliances (Energy Savings)

- Television and PC monitor
- Air conditioners, Air purifiers

What is passive infrared type?

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

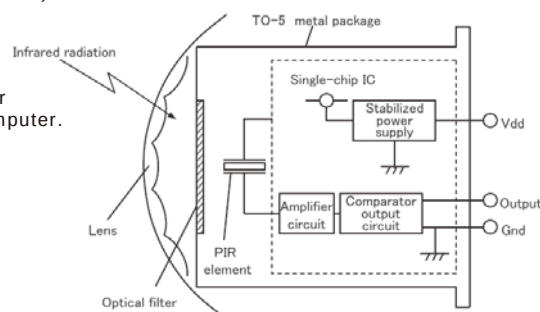
- ① As this sensor detects temperature differences, it is well suited to detecting the motion of people by their body temperature.
- ② Wide sensing area.



Compliance with RoHS Directive

Block Diagram (Digital output circuit)

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



ORDERING INFORMATION

EKMC

Output: 1: Digital

Current Consumption: 6: 170 μ A

Detection Performance: 01: Standard detection type
03: Long distance detection type

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

Lens Material: 1: Polyethylene

Mounting: 1: TO-5

PRODUCT TYPES

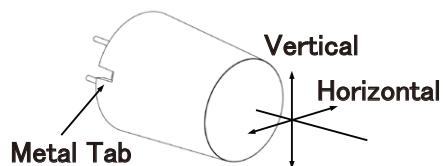
Detection Performance	Current Consumption	Lens Color	Model No.	Inner Package	Outer Package
Standard detection type	170 μ A	White	EKMC1601111	50pcs	1000pcs
		Black	EKMC1601112		
		Pearl White	EKMC1601113		
Long Distance detection type	170 μ A	White	EKMC1603111	50pcs	1000pcs
		Black	EKMC1603112		
		Pearl White	EKMC1603113		

PERFORMANCE**1. Detection Performance** [Conditions for measuring: Ambient temperature:25°C(77°F) Operating voltage:5VDC]

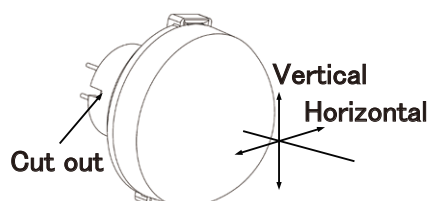
Items		Standard Detection type	Long Distance Detection type	Conditions concerning target
Detection Range *1)		Max. 5m	Max. 12m	1. The temperature difference between the target and the surroundings should be superior to 4°C(7.2°F). 2. Movement speed: 1.0m/s 3. Target concept is human body (Size: 700 × 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 its temperature difference with the surroundings, detection can occur at a range superior to the above value. However, please use this sensor according to the specifications.

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



Standard detection type



Long Distance detection type

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

2. Maximum Rated Values

Items	Specified value
Power Supply Voltage	-0.3~7.0V DC
Usable Ambient Temperature	-20~+60°C (-4~+140°F) Do not use in a freezing or condensation environment.
Storage Temperature	-20~+70°C (-4~+158°F)