PL Pyroelectric Infrared Sensors

Overview

KEMET's Pyroelectric Infrared Sensors have a low profile design and can be used without a lens to enable miniaturized designs and are ideal to detect human proximity by IR presence.

KEMET's proprietary piezoelectric ceramic material and structural development of the pyroelectric infrared sensor enables human presence detection through solid plastic materials or glass, which allows more mechanical and optical appearance design possibilities of the end product. The sensor can be used without a lens or, to extend the detection range, a proprietary KEMET lens can be used in 3 different colors.

Applications

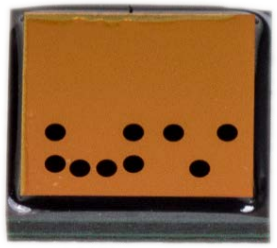
Typical applications include human presence detection sensing for energy saving functions in:

- Contact less switching
- Office automation equipment
- Home appliances
- Lighting
- Display products
- Air-conditioners
- TV
- PC monitors
- Rice cookers
- Smart toilets

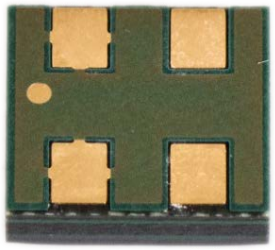
Benefits

- Reflow capable SMD configuration
- Lens not required
- A lens can be attached to the sensor
- Wide view angle up to ±60 degrees (lensless)
- View angle up to ±37/±28 degrees (with lens)
- Detection possible through glass or resin
- Low power consumption, down in the µA range
- Excellent radio wave performance in high-frequency band
- Compact and low profile (5.0 x 4.8 x 1.7 mm)

Sensor - Front



Sensor - Back



Natural Lens

White Lens

Black Lens

Ordering Information

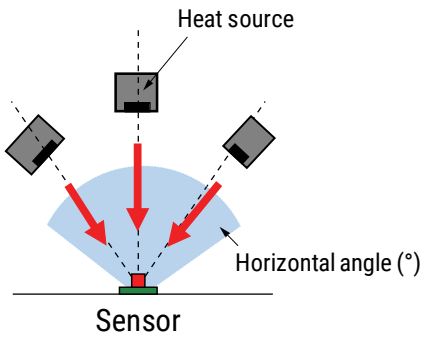
PL-	N	823-	01
Series	Lens Type	Sensor Type	Serial Number
PL	N = Lens not supported Q = Lens supported[1]	823 873	01 02

[1] *The Lens Type "Q = Lens supported" is not including the lens itself, to be selected and purchased separately, as per below table.*

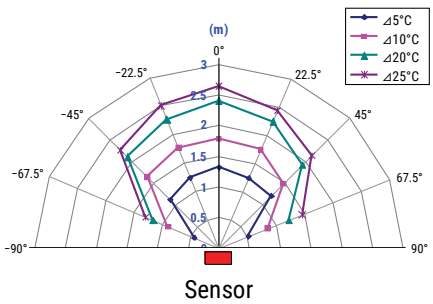
PL-	001L-	N
Series	Lens Type	Color Type
PL	001L	BK = Black N = Natural W = White

Performance Characteristics

Measuring Method



Detected Distance (m)



ΔT (°C) = Difference between room temperature and heat source temperature