

Infrared Sensing Solutions

Features and Benefits

- Digital communication
- Lens included
- Line arrays: 8 px or 16 px available
- Spatial array 4x4 px

Applications

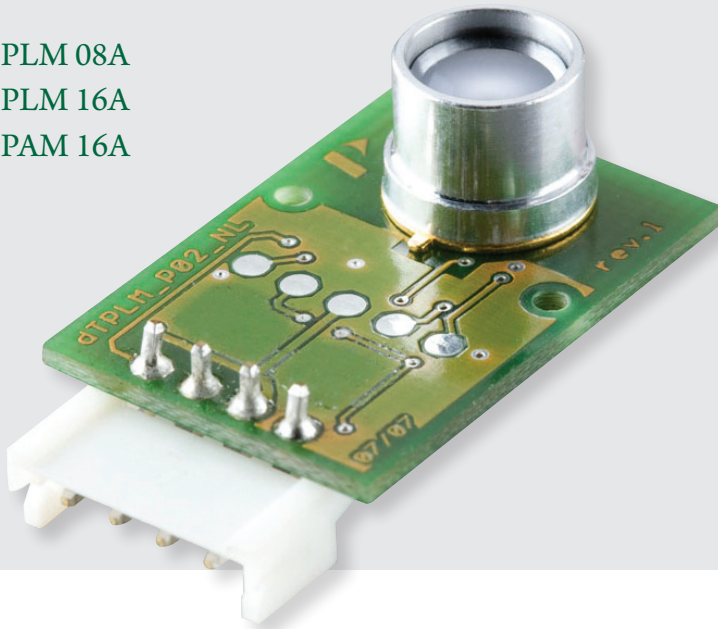
Energy conservation:

- Air conditioner control
- Heating and ventilation

High end security:

- Intrusion alarm

dTPLM 08A
dTPLM 16A
dTPAM 16A



Cool Eye™ Thermopile Array Family

Introduction

PerkinElmer's new Cool Eye™ Thermopile Array is a detector family used in indoor climate control that helps today's appliances become smarter and conserve energy. It features two line arrays and one spatial array in module design on a pcb with a connector. The arrays include lenses,

E2PROM and a microcontroller with an integrated 10 bit analog to digital converter to enable digital communication.

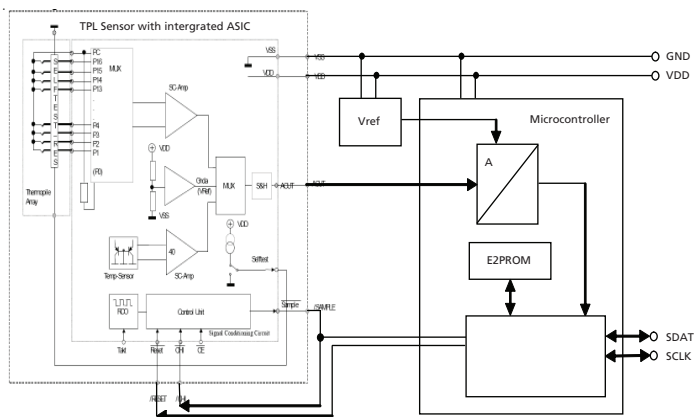
The Cool Eye Thermopile Array family is designed for applications that require low resolution 3-D thermal images capable of resolving humans and animals without the use of expensive, high-resolution infrared (IR) imaging cameras. PerkinElmer's new 16-element thermopile array's enhanced sensitivity provides significant improvements in temperature resolution, thus enhancing energy conservation by up to 30% in today's HVAC applications. With the Cool Eye, there is also greater flexibility, due to microcontroller integration, and it is easier for OEMs to integrate into their overall system.

The Cool Eye is ideal for energy management in both home and office automation applications such as HVAC, and is available in the following versions:

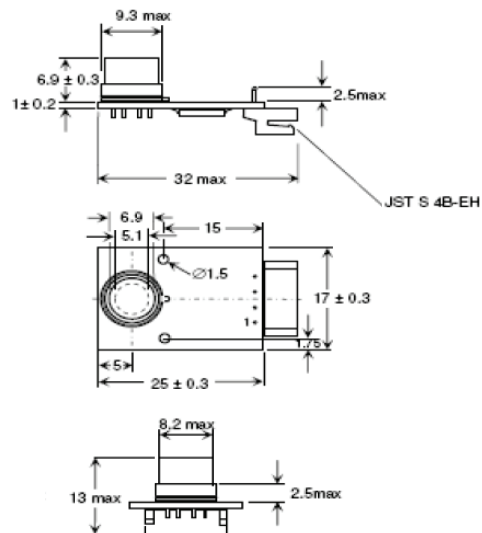
- 8 Element Line Array: dTPLM 08A
- 16 Element Line Array: dTPLM 16A
- 4x4 Spatial Array: dTPAM 16A

TECHNICAL DATA

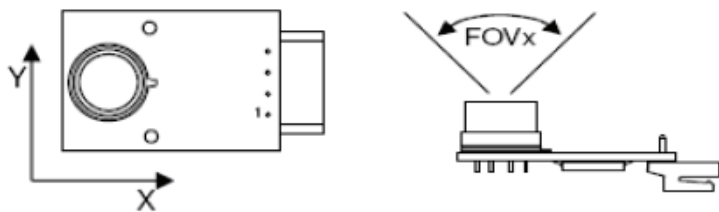
Physical Configuration



Physical Configuration

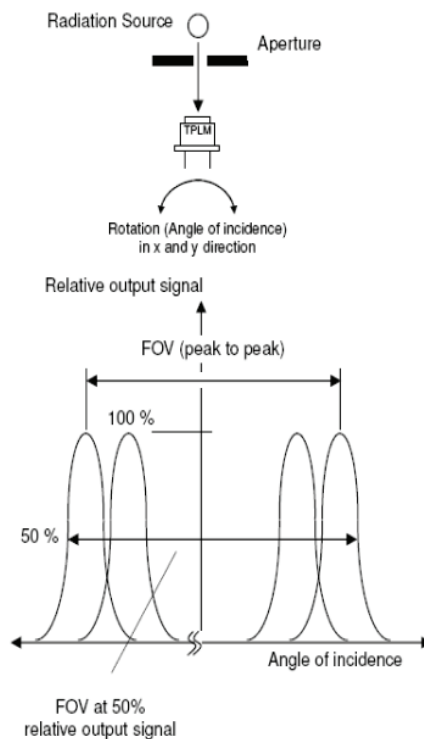


Field of View Definition



The optic defines the viewing angle or field of view (FOV) of the sensor.
 The FOV_x is defined as the incidence angle difference, between pixel peak position #1 and position #16
 The FOV_y is defined as the incidence angle difference, between pixel peak position #7 and position #8

Field of View



Symbol Electrical Characteristics

Min	Typ	Max	Unit	Conditions
VDD	Supply voltage	4.5	5	5.5 V
IDD	Supply current		5	6.5 mA
ViL	Interface low level input voltage			0.8 V falling edge
ViH	Interface high level input voltage	0.8VDD		VDD+0.3 V rising edge
VoL	Low level output voltage 1)			0.4 V Output current 2 mA

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