PRELIMINARY

Product image for illustration purposes only.

Digital output infrared sensor

MMS701 series(Normal temperature)

Outline

This product is an infrared sensor using MEMS thermopile technology. This sensor can measure surface temperature of objects without touching them by capturing infrared ray radiation from the objects. The product outputs a digital value of surface temperature of the object. I2C is adopted for the interface. Temperature of the sensor itself can also be measured.

Applications

Home electric appliances (refrigerator, freezer, air conditioner, microwave oven, etc.), Detection of human face temperature, and other contactless temperature monitoring.

Features

① Low noise level

Noise-equivalent temperature (NETD): below 0.06℃

② Temperature value directly available

Ambient temperature compensated value of object temperature is output. Easy for rapid application engineering.

③ Easily mountable with a connector

No need to prepare dedicated board for the sensor.

Other electrical connection is possible (ex. pin header).

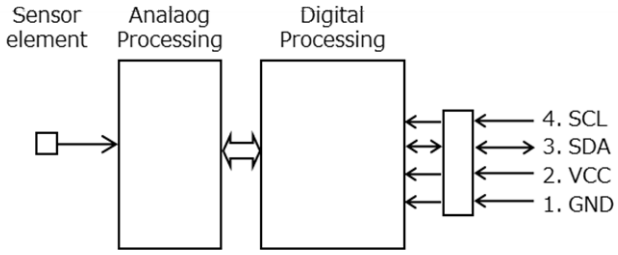
Specification (Draft for market research)

ITEM	SPECIFICATION
Supply Voltage Range	4.5 to 5.5VDC (5.0V typ.)
Object Temperature Range	-40℃ to 100℃
Operating Temperature Range	-40℃ to 100℃
Field of View (FOV)	25°
Pixels	1 pixel
Noise-equivalent temperature (NETD)	0.06℃
Temperature Accuracy	±1.5℃ max. (@calibration point)
Current Consumption	3.5mA typ.
Interface	I2C
Size	11.6(W)x12(D)x8.8(H)mm*

Calibration point : ①Tx=25℃、Ta=25℃ ②Tx=45℃、Ta=25℃
③Tx=45℃、Ta=45℃ Tx:The object temp.、Ta:The reference temp.

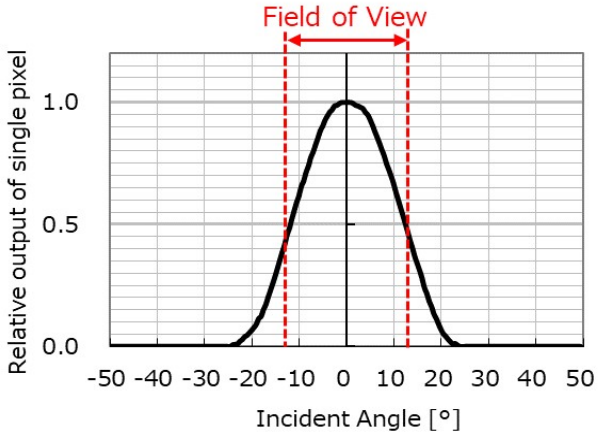
*Connector is included.

Block Diagram



Typical Performance Characteristics

In case of 1 pixel product



Field of View (FOV): defined as the angular range of inceident infrared ray at half signal point.

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April 2023 Rev.1'