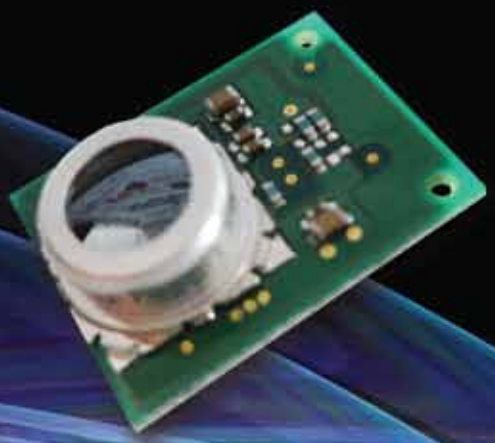
Imagination

D6T Series MEMS Thermal IR Sensor



Detection of Stationary Human Presence by Non-contact Temperature Measurement

- High Accuracy
- Small Size
- I^2C Digital Output
- Temperature Output for Each Pixel
- High sensitivity/Low Noise
- Variety of Pixel Arrays Available
- Hot Spot Detection

COMING SOON

D6T - 16 x 16

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Ordering Information

Element type	Model
4 4	**D6T-44L-06**
1×8	**D6T-8L-06**

Ratings

Item	Specification
Power supply voltage	4.5 to 5.5 VDC
Storage temperature range	-10 to 60°C (with no icing or condensation)
Operating temperature range	0 to 50°C (with no icing or condensation)
Storage humidity range	85% max. (with no icing or condensation)
Operating humidity range	20% to 85% (with no icing or condensation)

Characteristics

Item		D6T-44L-06	D6T-8L-06
View angle (see note 1)	**X direction**	44.2°	62.8°
	Y direction	45.7°	6.0°
Object temperature output accuracy (See note 2)	**Accuracy 1**	±1.5°C max. Measurement conditions: V_{CC} = 5.0 V (1) Tx = 25°C, Ta = 25°C (2) Tx = 45°C, Ta = 25°C (3) Tx = 45°C, Ta = 45°C	
	Accuracy 2	±3.0°C max. Measurement conditions: V_{CC} = 5.0 V (4) Tx = 25°C, Ta = 45°C	
Current consumption		5 mA typical	

Functions

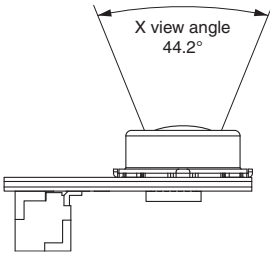
Item	Specification
Object temperature detection range (see note 2)	5 to 50°C
Reference temperature detection range (see note 2)	5 to 45°C
Output specifications	Digital values that correspond to the object temperature (Tx) and reference temperature (Ta) are output from a serial communications port.
Output form	Binary code (10 times the detected temperature (°C))
Communications form	I^2C compliant
Temperature resolution (NETD)	0.14°C

Note: 1. Refer to Field of View Characteristics in the Engineering Data section.
2. Refer to Object Temperature Detection Range in the Engineering Data section.

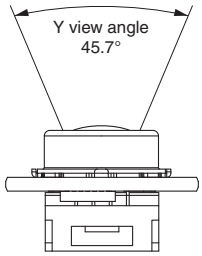
Field of View Characteristics

D6T-44L-06

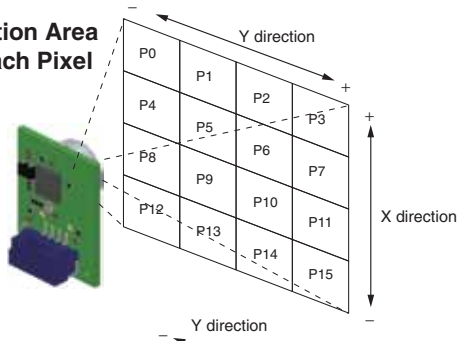
Field of view in X Direction



Field of view in Y Direction

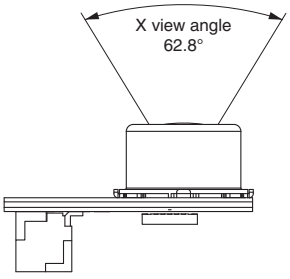


Detection Area for Each Pixel

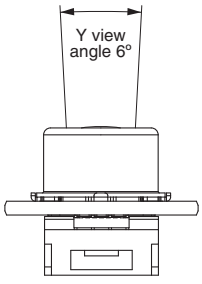


D6T-8L-06

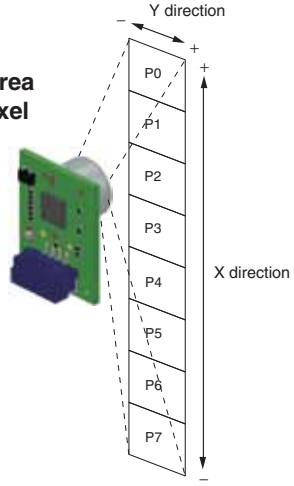
Field of view in X Direction



Field of view in Y Direction



Detection Area for Each Pixel



Note: Definition of view angle: Using the maximum Sensor output as a reference, the angular range where the Sensor output is 50% or higher when the angle of the Sensor is changed is defined as the view angle.

Note: Additional information can be found on the Omron website

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