MEMS Thermal Sensors
D6T

Contactless measurement
creating energy-efficient and comfortable living spaces

Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.

Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the range and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

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Cat. No. A274-E1-01
0318-0.5M(0318)(O)
OMRON's unique MEMS technology allows combining thermopile elements and ASICs into one package resulting to ultra-compact footprint.
Detect wavelengths in the range 8-12 μm

Infrared ray

Achieving the highest level of SNR* in the world *2

* SNR: Signal-to-Noise Ratio. Compares the level of a signal to the level of background noise
*2 As of December 2017, according to OMRON research

MEMS Thermal (IR* sensor) measures the surface temperature of objects without touching them when the thermopile element absorbs the amount of radiant energy from the object.

*IR: Infrared Ray

OMRON’s unique MEMS technology allows combining thermopile elements and ASICs into one package resulting to ultra-compact footprint.

High Accuracy, Smaller Footprint, East to Work With

Low noise

Converts sensor signal to digital temperature output allowing easy use of microcontroller

Easy connection

Compact size

Space-saving design, well-suited for embedded applications

Cross-section view of D6T sensor

Silicon lens
far-infrared focusing

MEMS thermopile
Electromotive force occurrence

ASIC
Low noise amplifier

MCU
A/D conversion, calculation, I2C and I/F

Infrared ray

Detect wavelengths in the range 8-12 μm

MEMS thermopile

Detection principle

Cold junction

Thermopile

Cold junction

The sensor utilizes the seebeck effect in which thermoelectric force is generated due to the temperature difference that occurs across the junction points of two different types of metal.
Human Detection

D6T series sensors can detect human presence by sensing changes in human body temperature with respect to the surrounding temperature.

D6T series sensors can detect the slightest temperature changes that can be used in a variety of applications including energy-efficient home appliances and security systems. The sensors can also be used in the application fields of HEMS (Home Energy Management System) and BEMS (Building Energy Management System).

**Detection results of temperature distribution**

**D6T application fields**
Air conditioners, lighting systems, security systems, nursing care and monitoring equipment

**Sensor installation condition**
Recommended type: D6T-44L-06 (4x4-element / viewing angle: X=44.2° Y=45.7° / Object temperature range: 0 – 50degC)
Human Detection

D6T series sensors can detect human presence by sensing changes in human body temperature with respect to the surrounding temperature.

D6T series sensors can detect the slightest temperature changes that can be used in a variety of applications including energy-efficient home appliances and security systems. The sensors can also be used in the application fields of HEMS (Home Energy Management System) and BEMS (Building Energy Management System).

Detection results of temperature distribution

Recommended type: D6T-44L-06 (4x4-element / viewing angle: X=44.2 Y=45.7° / Object temperature range: 0 – 50degC)
Object Detection

D6T sensors can detect objects by pinpointing the target object temperature.

D6T sensors let you measure temperature without the need to physically touch the object. This allows measuring temperature where it was not possible for contact thermal sensors due to space shortage. The sensors can be used in a wide range of applications including FEMS (Factory Energy Management System).
Object Detection

D6T sensors can detect objects by pinpointing the target object temperature.

D6T sensors let you measure temperature without the need to physically touch the object. This allows measuring temperature where it was not possible for contact thermal sensors due to space shortage. The sensors can be used in a wide range of applications including FEMS (Factory Energy Management System).
Comparison with Pyroelectric Sensor

Both the pyroelectric sensor and non-contact MEMS thermal sensor can detect even the slightest amount of radiant energy from objects such as infrared radiation and convert them into temperature readings. However, unlike pyroelectric sensor that relies on motion detection, non-contact MEMS thermal sensor is able to detect the presence of stationary humans (or objects).

### Pyroelectric sensor
Converts temperature readings only when detecting "temperature changes in the radiant energy" in its field of view.

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>D6T-1A-01</th>
<th>D6T-1A-02</th>
<th>D6T-8L-09</th>
<th>D6T-44L-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Number of elements</td>
<td>1(1x1)</td>
<td>8(1x8)</td>
<td>16(4x4)</td>
<td></td>
</tr>
<tr>
<td>Number of elements X-direction</td>
<td>X = 58.0°</td>
<td>X = 28.5°</td>
<td>X = 54.5°</td>
<td>X = 44.2°</td>
</tr>
<tr>
<td>Number of elements Y-direction</td>
<td>Y = 58.0°</td>
<td>Y = 28.5°</td>
<td>Y = 5.5°</td>
<td>Y = 45.7°</td>
</tr>
<tr>
<td>Size of measurement area</td>
<td>Distance X</td>
<td>Distance Y</td>
<td>Distance X</td>
<td>Distance Y</td>
</tr>
<tr>
<td>Distance 1m</td>
<td>X = 111cm</td>
<td>Y = 111cm</td>
<td>X = 103cm</td>
<td>X = 81cm</td>
</tr>
<tr>
<td></td>
<td>Y = 111cm</td>
<td>Y = 47cm</td>
<td>Y = 10cm</td>
<td>Y = 84cm</td>
</tr>
<tr>
<td>Distance 2m</td>
<td>X = 222cm</td>
<td>Y = 222cm</td>
<td>X = 206cm</td>
<td>X = 162cm</td>
</tr>
<tr>
<td></td>
<td>Y = 222cm</td>
<td>Y = 94cm</td>
<td>Y = 20cm</td>
<td>Y = 160cm</td>
</tr>
<tr>
<td>Distance 3m</td>
<td>X = 333cm</td>
<td>Y = 333cm</td>
<td>X = 309cm</td>
<td>X = 244cm</td>
</tr>
<tr>
<td></td>
<td>Y = 333cm</td>
<td>Y = 141cm</td>
<td>Y = 30cm</td>
<td>Y = 253cm</td>
</tr>
</tbody>
</table>

Both the pyroelectric sensor and non-contact MEMS thermal sensor can detect even the slightest amount of radiant energy from objects such as infrared radiation and convert them into temperature readings. However, unlike pyroelectric sensor that relies on motion detection, non-contact MEMS thermal sensor is able to detect the presence of stationary humans (or objects).

### MEMS thermal sensor (thermopile)
Converts temperature readings by "continuously detecting the temperature of radiant energy" in its field of view.

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>D6T-1A-01</th>
<th>D6T-1A-02</th>
<th>D6T-8L-09</th>
<th>D6T-44L-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Number of elements</td>
<td>1(1x1)</td>
<td>8(1x8)</td>
<td>16(4x4)</td>
<td></td>
</tr>
<tr>
<td>Number of elements X-direction</td>
<td>X = 58.0°</td>
<td>X = 28.5°</td>
<td>X = 54.5°</td>
<td>X = 44.2°</td>
</tr>
<tr>
<td>Number of elements Y-direction</td>
<td>Y = 58.0°</td>
<td>Y = 28.5°</td>
<td>Y = 5.5°</td>
<td>Y = 45.7°</td>
</tr>
<tr>
<td>Size of measurement area</td>
<td>Distance X</td>
<td>Distance Y</td>
<td>Distance X</td>
<td>Distance Y</td>
</tr>
<tr>
<td>Distance 1m</td>
<td>X = 111cm</td>
<td>Y = 111cm</td>
<td>X = 103cm</td>
<td>X = 81cm</td>
</tr>
<tr>
<td></td>
<td>Y = 111cm</td>
<td>Y = 47cm</td>
<td>Y = 10cm</td>
<td>Y = 84cm</td>
</tr>
<tr>
<td>Distance 2m</td>
<td>X = 222cm</td>
<td>Y = 222cm</td>
<td>X = 206cm</td>
<td>X = 162cm</td>
</tr>
<tr>
<td></td>
<td>Y = 222cm</td>
<td>Y = 94cm</td>
<td>Y = 20cm</td>
<td>Y = 160cm</td>
</tr>
<tr>
<td>Distance 3m</td>
<td>X = 333cm</td>
<td>Y = 333cm</td>
<td>X = 309cm</td>
<td>X = 244cm</td>
</tr>
<tr>
<td></td>
<td>Y = 333cm</td>
<td>Y = 141cm</td>
<td>Y = 30cm</td>
<td>Y = 253cm</td>
</tr>
</tbody>
</table>

* The sizes of measurement area indicated above are for reference only.
* The size of measurement area changes according to sensor mounting angle.
# Viewing Angle and Measurement Area

Choose your preferred sensor viewing angle to meet your application needs.

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>D6T-1A-01</th>
<th>D6T-1A-02</th>
<th>D6T-8L-09/09H</th>
<th>D6T-44L-06/06H</th>
<th>D6T-32L-01A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td><img src="image1.png" alt="Sensor type" /></td>
<td><img src="image2.png" alt="Sensor type" /></td>
<td><img src="image3.png" alt="Sensor type" /></td>
<td><img src="image4.png" alt="Sensor type" /></td>
<td><img src="image5.png" alt="Sensor type" /></td>
</tr>
<tr>
<td>Number of elements</td>
<td>1(1x1)</td>
<td>8(1x8)</td>
<td>16(4x4)</td>
<td>1024(32x32)</td>
<td></td>
</tr>
<tr>
<td>Number of elements X-direction</td>
<td>X = 58.0°</td>
<td>X = 26.5°</td>
<td>X = 54.5°</td>
<td>X = 44.2°</td>
<td>X = 90.0°</td>
</tr>
<tr>
<td>Number of elements Y-direction</td>
<td>Y = 58.0°</td>
<td>Y = 26.5°</td>
<td>Y = 5.5°</td>
<td>Y = 45.7°</td>
<td>Y = 90.0°</td>
</tr>
<tr>
<td>Size of measurement area</td>
<td><img src="image6.png" alt="Size of measurement area" /></td>
<td><img src="image7.png" alt="Size of measurement area" /></td>
<td><img src="image8.png" alt="Size of measurement area" /></td>
<td><img src="image9.png" alt="Size of measurement area" /></td>
<td></td>
</tr>
<tr>
<td>Distance 1m</td>
<td>X = 111cm</td>
<td>X = 47cm</td>
<td>X = 103cm</td>
<td>X = 81cm</td>
<td>X = 200cm</td>
</tr>
<tr>
<td>Distance 2m</td>
<td>X = 222cm</td>
<td>X = 94cm</td>
<td>X = 206cm</td>
<td>X = 162cm</td>
<td>X = 400cm</td>
</tr>
<tr>
<td>Distance 3m</td>
<td>X = 333cm</td>
<td>X = 141cm</td>
<td>X = 309cm</td>
<td>X = 244cm</td>
<td>X = 600cm</td>
</tr>
</tbody>
</table>

* The sizes of measurement area indicated above are for reference only.
* The size of measurement area changes according to sensor mounting angle.
High Sensitivity Enables Detection of Stationary Human Presence

- OMRON’s unique MEMS and ASIC technology achieve a high SNR (except for the D6T-32L-01A).
- Superior noise immunity with a digital output.
- High-precision area temperature detection with low cross-talk field of view characteristics.

RoHS Compliant

⚠️ Refer to Safety Precautions on page 17.

Ordering Information

### Thermal Sensors

<table>
<thead>
<tr>
<th>Element type</th>
<th>Model</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>4×4</td>
<td>D6T-44L-06/06H</td>
<td></td>
</tr>
<tr>
<td>1×8</td>
<td>D6T-8L-09/09H</td>
<td></td>
</tr>
<tr>
<td>1×1</td>
<td>D6T-1A-01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D6T-1A-02</td>
<td></td>
</tr>
<tr>
<td>32×32</td>
<td>D6T-32L-01A</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories (Sold separately)

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Harness</td>
<td>D6T-HARNESS-02</td>
</tr>
</tbody>
</table>

Model Number Legend

D6T-□□□

(1) (2) (3)

(1) Number of elements
- 44L : 16 (4 × 4)
- 8L : 8 (1 × 8)
- 1A : 1 (1 × 1)
- 32L : 1024 (32 × 32)

(2) Viewing angle
- 06 : X direction=44.2°, Y direction=45.7°
- 09 : X direction=54.5°, Y direction=5.5°
- 01 : X direction, Y direction=58.0°
- 02 : X direction, Y direction=26.5°
- 01A : X direction, Y direction=90.0°

(3) Special Functions
- H : High-temperature type
- Non-display : Standard sensor
### Ratings, Specifications, and Functions

#### Ratings

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>D6T-44L-06/06H</th>
<th>D6T-8L-09/09H</th>
<th>D6T-1A-01</th>
<th>D6T-1A-02</th>
<th>D6T-32L-01A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td></td>
<td>4.5 to 5.5 VDC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage temperature range</td>
<td></td>
<td>-10 to 60°C</td>
<td>-20 to 80°C</td>
<td>-20 to 80°C</td>
<td>-40 to 80°C</td>
<td>-20 to 80°C</td>
</tr>
<tr>
<td>(with no icing or condensation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td></td>
<td>0 to 50°C</td>
<td>0 to 60°C</td>
<td>0 to 60°C</td>
<td>-40 to 80°C</td>
<td>-10 to 70°C</td>
</tr>
<tr>
<td>(with no icing or condensation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage humidity range</td>
<td></td>
<td>85% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>Operating humidity range</td>
<td></td>
<td>20% to 85%</td>
<td>20% to 95%</td>
<td>20% to 95%</td>
<td>20% to 95%</td>
<td>20% to 95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>D6T-44L-06/06H</th>
<th>D6T-8L-09/09H</th>
<th>D6T-1A-01</th>
<th>D6T-1A-02</th>
<th>D6T-32L-01A</th>
</tr>
</thead>
<tbody>
<tr>
<td>View angle *1</td>
<td></td>
<td>44.2°</td>
<td>54.5°</td>
<td>58.0°</td>
<td>26.5°</td>
<td>90°</td>
</tr>
<tr>
<td>X direction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y direction</td>
<td></td>
<td>45.7°</td>
<td>5.5°</td>
<td>58.0°</td>
<td>26.5°</td>
<td>90°</td>
</tr>
<tr>
<td>Object temperature output accuracy *2</td>
<td></td>
<td>±1.5°C max.</td>
<td>±1.5°C max.</td>
<td>±3.0°C max.</td>
<td>±3.0°C max.</td>
<td>±3.0°C max.</td>
</tr>
<tr>
<td>Measurement conditions: Vcc = 5.0 V</td>
<td></td>
<td>Vcc = 5.0 V</td>
<td>Vcc = 5.0 V</td>
<td>Vcc = 5.0 V</td>
<td>Vcc = 5.0 V</td>
<td>Vcc = 5.0 V</td>
</tr>
<tr>
<td>(1) Tx = 25°C, Ta = 25°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Tx = 45°C, Ta = 25°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Tx = 45°C, Ta = 45°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Tx = 25°C, Ta = 45°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td></td>
<td>5 mA typical</td>
<td>3.5 mA typical</td>
<td></td>
<td></td>
<td>19 mA typical</td>
</tr>
</tbody>
</table>

#### Functions

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>D6T-44L-06/06H</th>
<th>D6T-8L-09/09H</th>
<th>D6T-1A-01</th>
<th>D6T-1A-02</th>
<th>D6T-32L-01A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object temperature detection range *2</td>
<td></td>
<td>5 to 50°C/5 to 200°C</td>
<td>5 to 50°C/5 to 200°C</td>
<td>5 to 50°C</td>
<td>-40 to 80°C</td>
<td>0 to 200°C</td>
</tr>
<tr>
<td>Ambient temperature detection range *2</td>
<td></td>
<td>5 to 45°C</td>
<td>5 to 45°C</td>
<td>5 to 45°C</td>
<td>-40 to 80°C</td>
<td>0 to 80°C</td>
</tr>
<tr>
<td>Output specifications</td>
<td></td>
<td>Digital values that correspond to the object temperature (Tx) and reference temperature (Ta) are output from a serial communications port.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output form</td>
<td></td>
<td>Binary code (10 times the detected temperature (°C))</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications form</td>
<td></td>
<td>I2C compliant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature resolution (NETD) *3</td>
<td></td>
<td>0.06°C</td>
<td>0.03°C</td>
<td>0.02°C</td>
<td>0.06°C</td>
<td>0.33°C *4</td>
</tr>
</tbody>
</table>

*1. Refer to Field of View Characteristics.
*2. Refer to Object Temperature Detection Range.
*3. Reference data
*4. Taken to be the average value of the central 4 pixels.
Object Temperature Detection Range

D6T-44L-06, D6T-8L-09, D6T-1A-01

D6T-44L-06H, D6T-8L-09H

D6T-1A-02

D6T-32L-01A

Connections

Thermal Sensor Configuration Diagram

< D6T-8L-09/09H >

Object temperature detection range

Terminal Arrangement

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Name</th>
<th>Function</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>Ground</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>VCC</td>
<td>Positive power supply voltage input</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>SDA</td>
<td>Serial data I/O line</td>
<td>Connect the open-drain SDA terminal to a pull-up resistor.</td>
</tr>
<tr>
<td>4</td>
<td>SCL</td>
<td>Serial clock input</td>
<td>Connect the open-drain SCL terminal to a pull-up resistor.</td>
</tr>
</tbody>
</table>

Note: The D6T-44L-06/06H has pixels 0 to 15.
The D6T-1A-01/02 has pixel 0.
The D6T-32L-01A has pixel 0 to 1023.
Field of View Characteristics

D6T-44L-06/06H
Field of view in X Direction

X view angle
44.2°

Field of view in Y Direction

Y view angle
45.7°

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.

D6T-8L-09/09H
Field of view in X Direction

X view angle
54.5°

Field of view in Y Direction

Y view angle
5.5°

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: 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.
**Dimensions (Unit: mm)**

**D6T-44L-06/06H**

Supporting and Mounting Area (Shaded Portion)

Top View

Bottom View

Note: Due to insulation distance limitations, do not allow metal parts to come into contact with the Sensor.

**D6T-8L-09/09H**

Supporting and Mounting Area (Shaded Portion)

Top View

Bottom View

Note: Due to insulation distance limitations, do not allow metal parts to come into contact with the Sensor.

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**Note:** Unless otherwise specified, a tolerance of ±0.3 mm applies to all dimensions.
Note: Unless otherwise specified, a tolerance of ±0.3 mm applies to all dimensions.

Note: Due to insulation distance limitations, do not allow metal parts to come into contact with the Sensor.

Cable Color
- GND – BLACK Wire
- VCC – RED Wire
- SDA – BLUE Wire
- SCL – YELLOW Wire

* Length of Cable removed sheath.

* Length of Cable removed sheath.

Note: Unless otherwise specified, a tolerance of ±0.3 mm applies to all dimensions.
Safety Precautions

Precautions for Correct Use

● Installation
• The Sensor may not achieve the characteristics given in this datasheet due to the ambient environment or installation location. Before using the Sensor, please acquire an adequate understanding and make a prior assessment of Sensor characteristics in your actual system.

● Operating Environment
• Do not use the Sensor in locations where dust, dirt, oil, and other foreign matter will adhere to the lens. This may prevent correct temperature measurements.
• Do not use the Sensor in any of the following locations.
  • Locations where the Sensor may come into contact with water or oil
  • Outdoors
  • Locations subject to direct sunlight.
  • Locations subject to corrosive gases (in particular, chloride, sulfide, or ammonia gases).
  • Locations subject to extreme temperature changes
  • Locations subject to icing or condensation.
  • Locations subject to excessive vibration or shock.

● Noise Countermeasures
• The Sensor does not contain any protective circuits. Never subject it to an electrical load that exceeds the absolute maximum ratings for even an instance. The circuits may be damaged. Install protective circuits as required so that the absolute maximum ratings are not exceeded.
• Keep as much space as possible between the Sensor and devices that generates high frequencies (such as high-frequency welders and high-frequency sewing machines) or surges.
• Attach a surge protector or noise filter on nearby noise-generating devices (in particular, motors, transformers, solenoids, magnetic coils, or devices that have an inductance component).
• In order to prevent inductive noise, separate the connector of the Sensor from power lines carrying high voltages or large currents. Using a shielded line is also effective.
• If a switching regulator is used, check that malfunctions will not occur due to switching noise from the power supply.

● Handling
• This Sensor is a precision device. Do not drop it or subject it to excessive shock or force. Doing so may damage the Sensor or change its characteristics. Never subject the connector to unnecessary force. Do not use a Sensor that has been dropped.
• Take countermeasures against static electricity before you handle the Sensor.
• Turn OFF the power supply to the system before you install the Sensor. Working with the Sensor while the power supply is turned ON may cause malfunctions.
• Secure the Sensor firmly so that the optical axis does not move.
• Install the Sensor on a flat surface. If the installation surface is not even, the Sensor may be deformed, preventing correct measurements.
• Do not install the Sensor with screws. Screws may cause the resist to peel from the board. Secure the Sensor in a way that will not cause the resist to peel.
• Always check operation after you install the Sensor.
• Use the specified connector (GHR-04 from JST) and connect it securely so that it will not come off. If you solder directly to the connector terminals, the Sensor may be damaged.
• Make sure to wire the polarity of the terminals correctly. Incorrect polarity may damage the Sensor.
• Never attempt to disassemble the Sensor.
• Do not use the cable harness to the other product.
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OMRON Corporation
Electronic and Mechanical Components Company

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