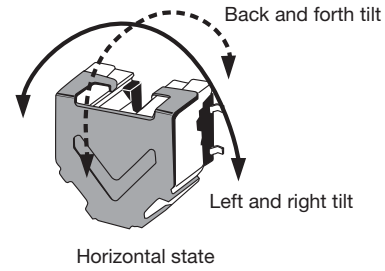


Subminiature PCB Mounting Sensor Discriminating Left or Right Tilt

- Detects the inclination of the Sensor within an activated angle range between 45° and 75° (left and right) and a reset angle range between 50° and 20°
- A subminiature SMD PCB mounting model
- A highly reliable solid-state type by Hall IC
- A surprisingly low power consumption with a maximum of 20µA
- Lead-free



Ordering Information

Output configuration	Model
ON/OFF	D6B-2

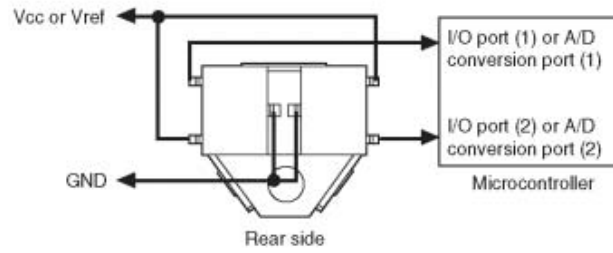
Application

Vertical or horizontal discrimination of digital cameras, PDAs, and cellular phones.

Performance

Operating characteristics	Activated angle	45° to 75° (left and right)
	Reset angle	50° and 20° (left and right)
Output Config.	Horizontal state	High-voltage signal output from the terminals on both sides.
	Inclined left or right	Low-voltage signal output only from the terminals on the side of the moving direction.
Electrical characteristics	<p>Note: Characteristic values are provided, on condition that there is no tilt back and forth while the operation speed is 10° per second.</p>	
	Ta = 25° and Vdd = 3V DC	
	Power supply voltage range (Vdd)	2.7 to 3.3 V DC
	High-voltage output	Vdd-0.5V min.
	Low-voltage output	0.5V DC max.
	Current consumption	20 µA max. (10 µA typical)
Maximum ratings	-0.1 to 5.0 V	
	Power supply voltage (Vdd)	
	Output current (Iout)	± 1mA
Basic specs.	Ambient temperature (operating)	-10°C to 60°C (with no condensation)
	Ambient temperature (storage)	-25°C to 70°C (with no condensation)
	Ambient humidity (operating)	25% to 85%

Electrical Connections



Soldering Condition

1. Recommendation reflow solder condition(infrared rays method)Please set the thermo-couple on the side of the terminal and set the reflow furnace as follows.

*In the case of Sn-Pb eutectic solder

	Temperature °C	Time(s)
Preheat area	140	90±30
Reflow area	230±5	≥ 20
Peak temperature	max. 240	≥ 5

*In the case of Pb-free solder

	Temperature °C	Time(s)
Preheat area	160±180	90±30
Reflow area	230±5	≥ 40
Peak temperature	max. 250	≥ 10

*Reflow times: Less than 2 times

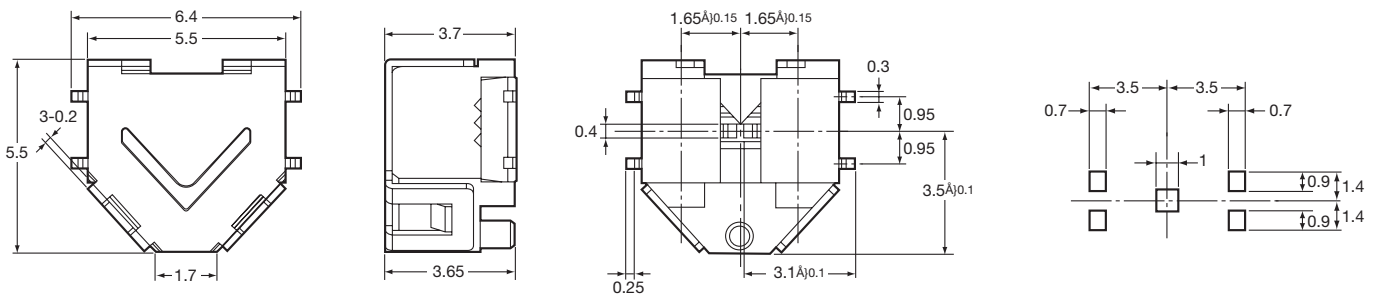
2. Detaching condition by blower

Please go within the detaching condition temperature 240°C and 5 seconds.

3. Please go for the hand solder at temperature 260°C and 10 second ahead or 350°C and 3 second or less.

4. The conventional solder containing lead can also be used.

External Conditions



Cautions

- The Sensor does not use any materials detrimental to the ozone layer.
- Specifications other than the electrical or mechanical characteristics, external dimensions, or mounting dimensions of the Sensor are subject to change without notice.

■ Handling Precautions

Operating Environment

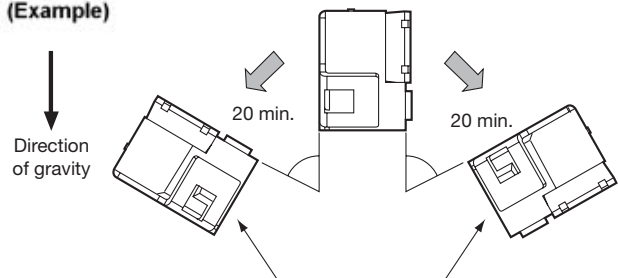
- The Sensor consists of a Hall IC and a magnet. Check that the Sensor in operation will not be influenced by any external magnetic fields.
- Do not install any magnetic materials within 2 mm of the Sensor, else the performance characteristics of the Sensor may not be guaranteeable. If there are any objects (e.g., motors and solenoids) generating magnetic fields near the Sensor, operate and test the Sensor before the Sensor comes into actual use.
- Do not apply any voltage exceeding 5V to the Sensor, else the Sensor may break.
- Do not wash the Sensor after the Sensor is soldered.
- Do not mount or dismount the Sensor while power is flowing to the Sensor.
- The Sensor may generate error signals if impacted at a minimum acceleration of 294 m/s^2 .
- The Sensor may generate error signals if a vibration at a minimum frequency of 15 Hz and a minimum acceleration of 15 m/s^2 is applied to the Sensor.

- Confirm that no static electricity at a maximum voltage of 5kV is applied to the pins, else the Sensor may break.

Operating Characteristics

The present output may be kept if the inclination of the Sensor back and forth is 20° or over. Under that condition, the output may not change even when the Sensor is leaned left or right.

(Example)



If the Sensor is kept inclined back or forth as shown in the above illustration, the level of output may not change from high to low or low to high when the Sensor inclines left or right.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.