

GP2Y0D02YK0F

Distance Measuring Sensor Unit
Digital output (80 cm) type



■Description

GP2Y0D02YK0F is a distance measuring sensor unit, composed of an integrated combination of PSD (position sensitive detector), IRED (infrared emitting diode) and signal processing circuit.

The variety of the reflectivity of the object, the environmental temperature and the operating duration are not influenced easily to the distance detection because of adopting the triangulation method.

The output voltage of this sensor stays high in case an object exists in the specified distance range. So this sensor can also be used as proximity sensor.

■Features

1. Digital output type
2. Detecting distance : Typ. 80 cm
3. Package size : 29.5×13×21.6 mm
4. Consumption current : Typ. 33 mA
5. Supply voltage : 4.5 to 5.5 V

■Agency approvals/Compliance

1. Compliant with RoHS directive (2002/95/EC)

■Applications

1. Touch-less switch
(Sanitary equipment, Control of illumination, etc.)
2. Sensor for energy saving
(ATM, Copier, Vending machine, Laptop computer, LCD monitor)
3. Amusement equipment
(Robot, Arcade game machine)

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The schematic diagram illustrates the internal components of a distance measuring IC. The IC is represented by a dashed rectangular box containing five main functional blocks: a Signal processing circuit, a Voltage regulator, an Oscillation circuit, an LED drive circuit, and an Output circuit. The Signal processing circuit is connected to a PSD (Position Sensitive Detector) on the left. The Voltage regulator is connected to a V_{CC} supply on the right. The Oscillation circuit is connected to the Signal processing circuit and the LED drive circuit. The LED drive circuit is connected to an LED on the left. The Output circuit is connected to the Oscillation circuit and the LED drive circuit. The output of the IC is labeled V_o and is connected to a 12KΩ resistor, which is in turn connected to a V_{CC} supply. The diagram also shows a GND connection and a V_{CC} connection at the top of the IC block.

(Unit : mm)

