

# GP2Y0D02YK

## Long Distance Measuring Sensor

### ■ Features

1. Less influence on the colors of reflected objects and their reflectivity, due to optical triangle measuring method
2. Distance judgement type  
Judgement distance: 80cm (Detection range: 20 to 150cm)
3. An external control circuit is not necessary  
Output can be connected directly to a microcomputer

### ■ Applications

1. For detection of human body and various types of objects in home appliances, OA equipment, etc

### ■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	-0.3 to +7	V
*1 Output terminal voltage	V <sub>O</sub>	-0.3 to V <sub>CC</sub> +0.3	V
Operating temperature	T <sub>opr</sub>	-10 to +60	°C
Storage temperature	T <sub>stg</sub>	-40 to +70	°C

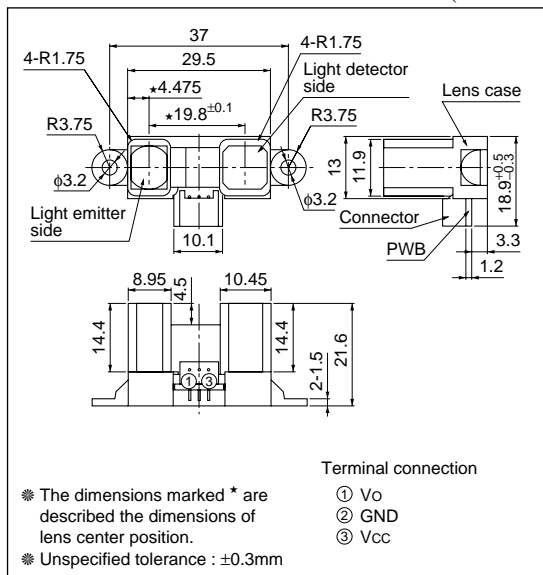
\*1 Open collector output

### ■ Recommended Operating Conditions

Parameter	Symbol	Rating	Unit
Operating Supply voltage	V <sub>CC</sub>	4.5 to 5.5	V

### ■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

(Ta=25°C, Vcc=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Distance measuring range	$\Delta L$	*2 *4	20	—	150	cm
Output terminal voltage	$V_{OH}$	*2 Output voltage at high level	$V_{CC} - 0.3$	—	—	V
	$V_{OL}$	*2 Output voltage at low level	—	—	0.6	V
Distance characteristics of output	$V_O$	*2 *3 *5	70	80	90	cm
Average dissipation current	$I_{CC}$	—	—	33	50	mA

Note) L:Distance to reflective object  
\*2 Using reflective object:White paper (Made by Kodak Co. Ltd. gray cards R-27 · white face, reflective ratio;90%)  
\*3 We ship the device after the following adjustment:Output switching distance L=80cm±10cm must be measured by the sensor  
\*4 Distance measuring range of the optical sensor system  
\*5 Output switching has a hysteresis width. The distance specified by  $V_O$  should be the one with which the output L switches to the output H

Fig.1 Internal Block Diagram

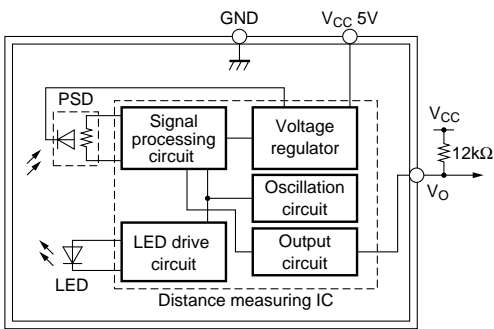


Fig.2 Timing Chart

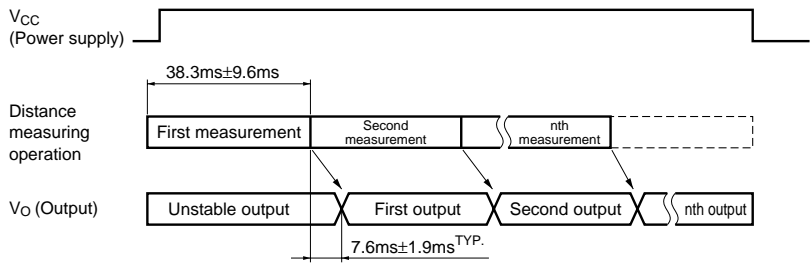
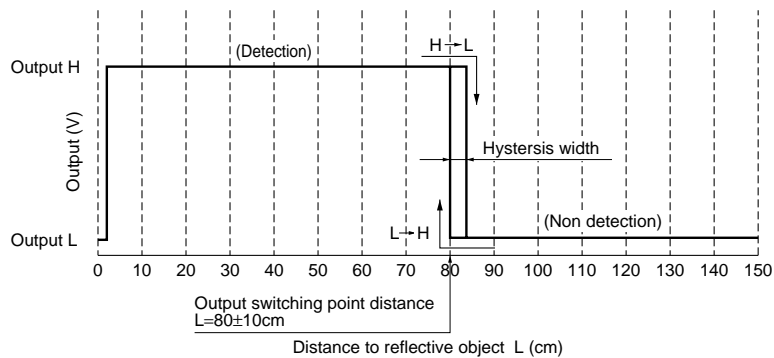


Fig.3 Distance Characteristics



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