

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 _{CC}	-0.3 to +7	V
*1 Output terminal voltage	V _O	-0.3 to V _{CC} +0.3	V
Operating temperature	T _{opr}	-10 to +60	°C
Storage temperature	T _{stg}	-40 to +70	°C

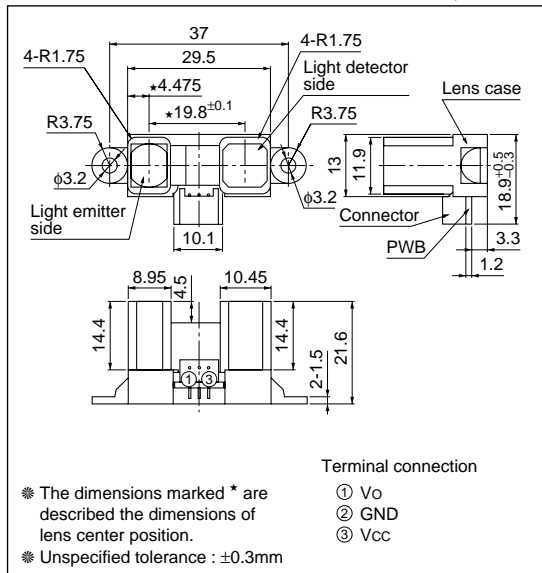
*1 Open collector output

■ Recommended Operating Conditions

Parameter	Symbol	Rating	Unit
Operating Supply voltage	V _{CC}	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	ΔL	*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

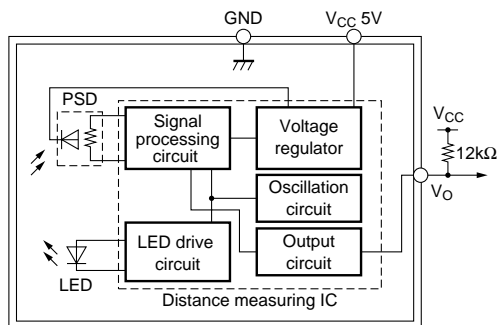


Fig.2 Timing Chart

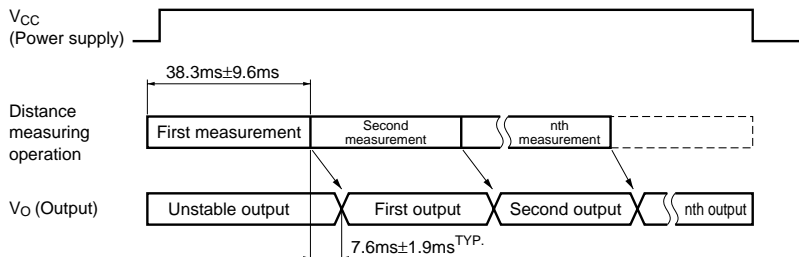
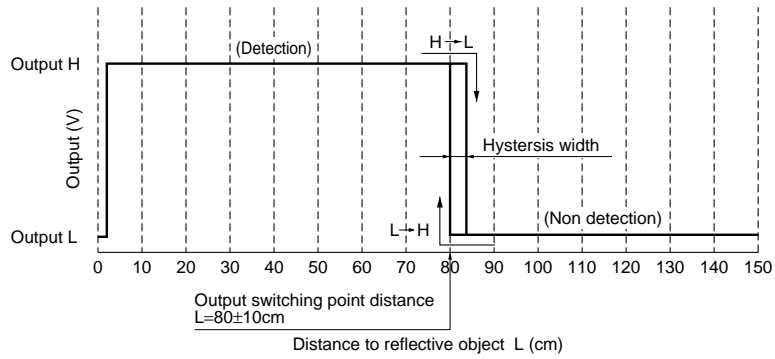


Fig.3 Distance Characteristics



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