GP2Y0A02YK

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 output type
   (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

(T_a=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

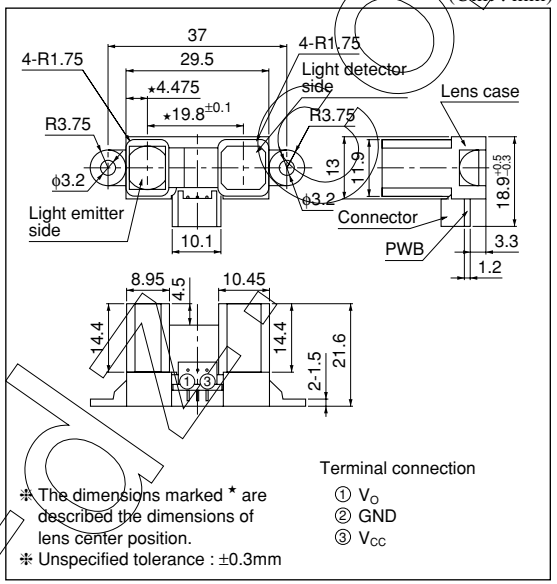
*1 Open collector output

■ 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

(T_a=25°C, V_{CC}=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Distance measuring range	ΔL	*2 *3	20	–	150	cm
Output terminal voltage	V_O	*2 L=150cm	0.25	0.4	0.55	V
Difference of output voltage	ΔV_O	*2 Output change at L=150cm to 20cm	1.8	2.05	2.3	V
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 Distance measuring range of the optical sensor system

Fig.1 Internal Block Diagram

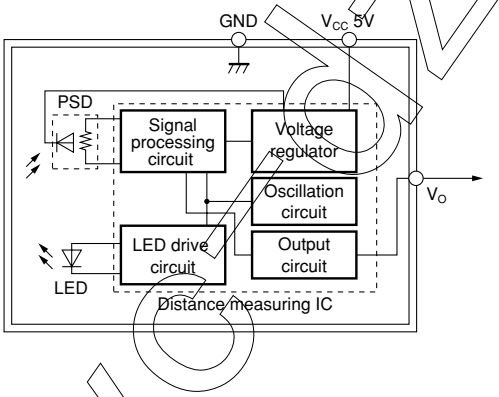


Fig.2 Timing Chart

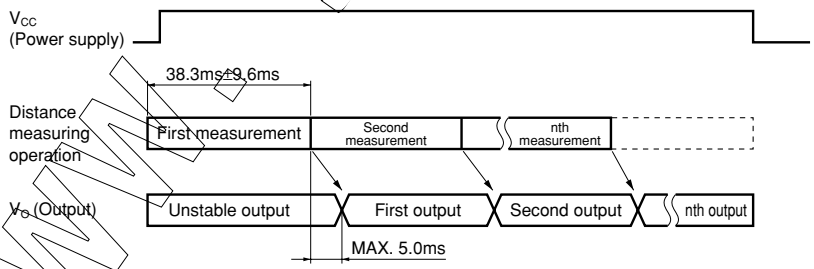
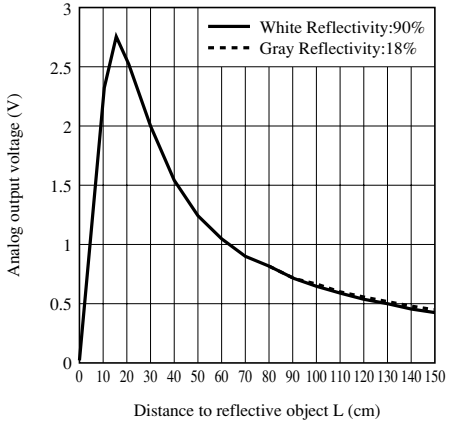


Fig.3 Analog Output Voltage vs. Distance to Reflective Object



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