GP2Y0D340K

Compact Distance Measuring Sensors

■ Features

1. Less influence on the color of reflective objects, reflectivity
2. Line-up of distance judgement type
   Detecting distance:10 to 60cm
   Judgement distance:40cm
   (Adjustable within the range of 10 to 60cm [Optionally available])
3. External control circuit is unnecessary

■ Applications

1. LCD monitor
2. Sanitary equipment
3. Personal computers
4. Game machine

■ Absolute Maximum Ratings (T_a=25˚C, V_{CC}=5V)

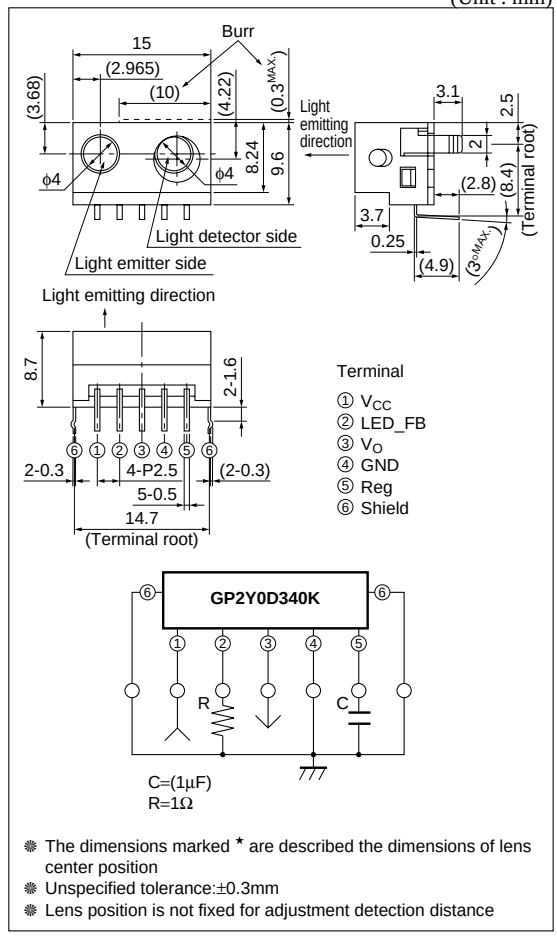
Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.3 to +7	V
Output terminal voltage	V_O	−0.3 to V_{CC} +0.3	V
Operating temperature	T_{opr}	−10 to +60	˚C
Storage temperature	T_{stg}	−20 to +70	˚C

■ Recommended Operating Conditions

Parameter	Symbol	Rating	Unit
Operating supply voltage	V_{CC}	4.5 to +5.5	V

■ Outline Dimensions

(Unit : mm)



✺ The dimensions marked ⋆ are described the dimensions of lens center position
✺ Unspecified tolerance:±0.3mm
✺ Lens position is not fixed for adjustment detection distance

Notice In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.
Internet Internet address for Electronic Components Group http://sharp-world.com/ecg/

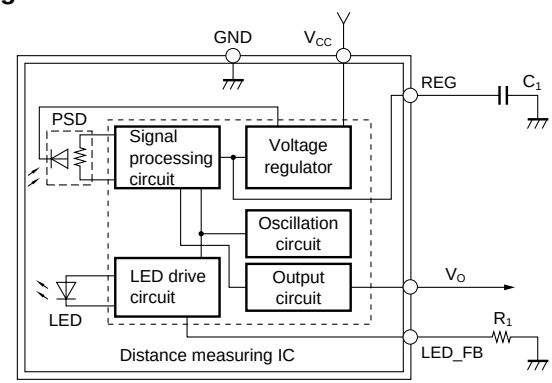
■ Electro-optical Characteristics

(T_a=25˚C, V_{CC}=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Distance measuring range	ΔL	*1 *3	10	–	60	cm
Output terminal voltage	V_{OH}	Output voltage at High *1	V_{CC} −0.3	–	–	V
	V_{OL}	Output voltage at Low*1	–	–	0.6	V
Distance characteristics of output	V_O	*1 *4 *2	35	40	45	cm
Average dissipation current	I_{CC}	at R_1=1Ω	–	28	35	mA

Note) L : Distance to reflective object
*1 Using reflective object : White paper (Made by Kodak Co. Ltd. gray cards R-27 · white face, reflective ratio;90%)
*2 We ship the device after the following adjustment : Output switching distance L=40cm±5cm must be measured by the sensor
*3 Distance measuring range of the optical sensor system
*4 Output switching has a hysteresis width. The distance specified by Vo should be the one with which the output L switches to the output H

Fig.1 Internal Block Diagram



C_1=(1μF)
R_1=1Ω (LED current TYP. 300mA)

Fig.2 Timing Chart

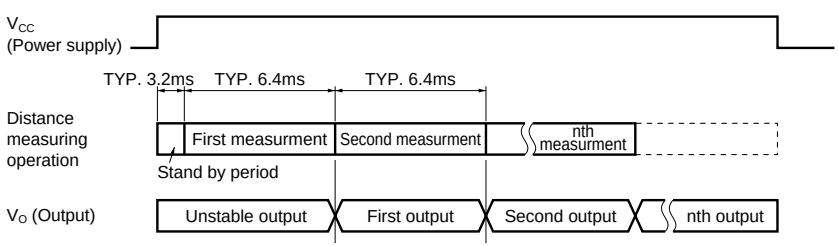
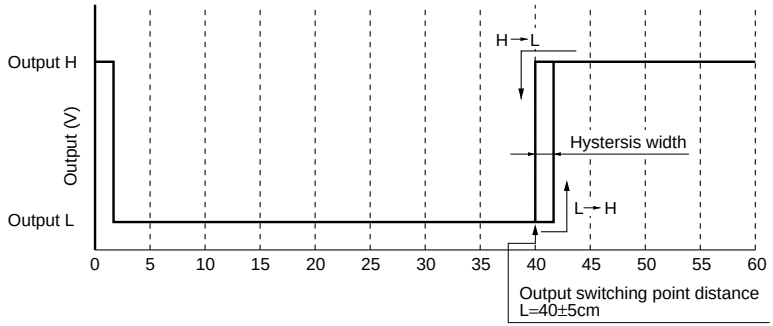


Fig.3 Distance Characteristics



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  --- Personal computers
  --- Office automation equipment
  --- Telecommunication equipment [terminal]
  --- Test and measurement equipment
  --- Industrial control
  --- Audio visual equipment
  --- Consumer electronics

  (ii) Measures such as fail-safe function and redundant design should be taken to ensure reliability and safety when SHARP devices are used for or in connection with equipment that requires higher reliability such as:
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  --- Traffic signals
  --- Gas leakage sensor breakers
  --- Alarm equipment
  --- Various safety devices, etc.

  (iii) SHARP devices shall not be used for or in connection with equipment that requires an extremely high level of reliability and safety such as:
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  --- Telecommunication equipment [trunk lines]
  --- Nuclear power control equipment
  --- Medical and other life support equipment (e.g., scuba).

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