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)

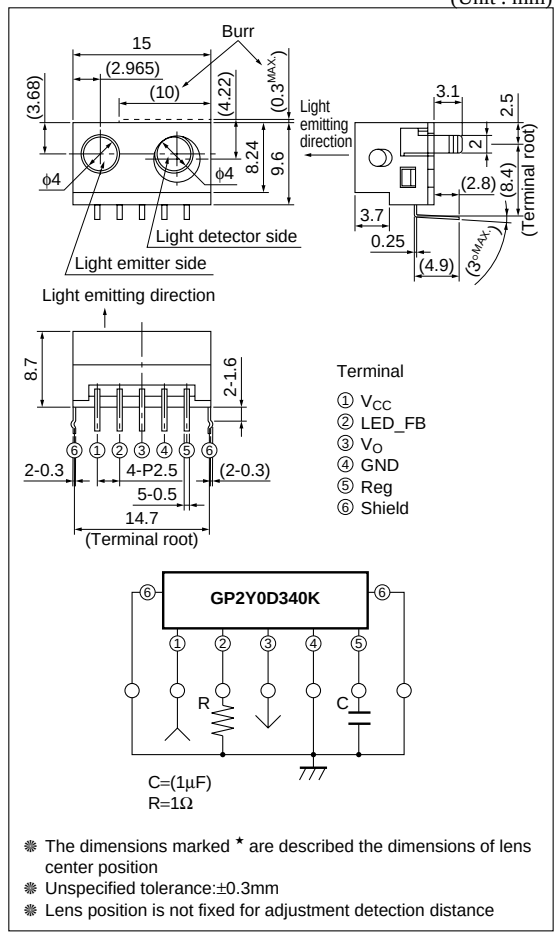
Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.3 to +7	V
Output terminal voltage	V_O	−0.3 to V_{CC} +0.3	V
Operating temperature	T_{opr}	−10 to +60	˚C
Storage temperature	T_{stg}	−20 to +70	˚C

■ 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

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Internet Internet address for Electronic Components Group http://sharp-world.com/ecg/

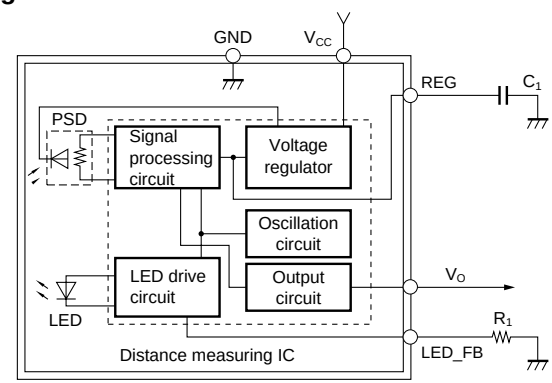
■ Electro-optical Characteristics

(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

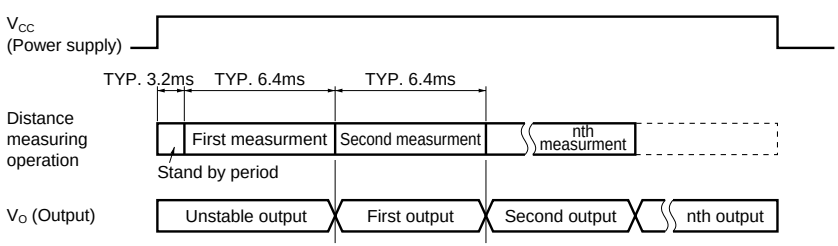
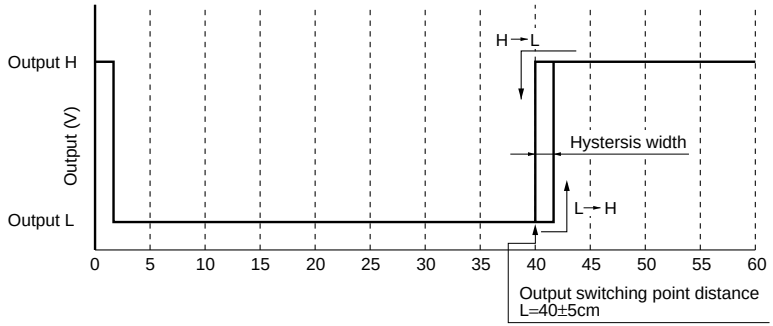


Fig.3 Distance Characteristics



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  --- 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.

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