

# 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 $(T_a=25^{\circ}\text{C}, V_{CC}=5\text{V})$

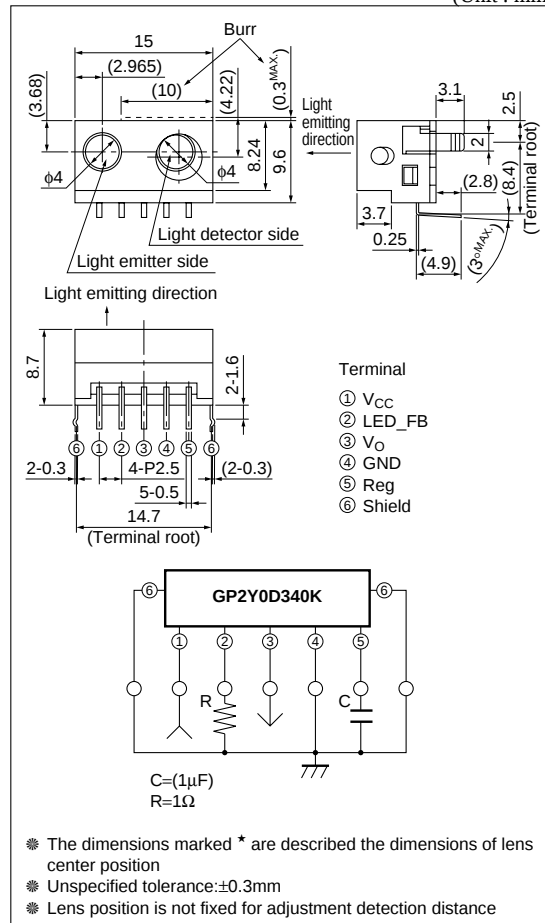
| Parameter               | Symbol    | Rating                 | Unit               |
|-------------------------|-----------|------------------------|--------------------|
| Supply voltage          | $V_{CC}$  | -0.3 to +7             | V                  |
| Output terminal voltage | $V_O$     | -0.3 to $V_{CC} + 0.3$ | V                  |
| Operating temperature   | $T_{opr}$ | -10 to +60             | $^{\circ}\text{C}$ |
| Storage temperature     | $T_{stg}$ | -20 to +70             | $^{\circ}\text{C}$ |

### ■ 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<sub>a</sub>=25°C, V<sub>CC</sub>=5V)

| Parameter                          | Symbol          | Conditions                | MIN.                 | TYP. | MAX. | Unit |
|------------------------------------|-----------------|---------------------------|----------------------|------|------|------|
| Distance measuring range           | $\Delta L$      | *1 *3                     | 10                   | —    | 60   | cm   |
| Output terminal voltage            | V <sub>OH</sub> | Output voltage at High *1 | V <sub>CC</sub> -0.3 | —    | —    | V    |
|                                    | V <sub>OL</sub> | Output voltage at Low *1  | —                    | —    | 0.6  | V    |
| Distance characteristics of output | V <sub>O</sub>  | *1 *4 *2                  | 35                   | 40   | 45   | cm   |
| Average dissipation current        | I <sub>CC</sub> | at R <sub>I</sub> =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 V<sub>O</sub> should be the one with which the output L switches to the output H

Fig.1 Internal Block Diagram

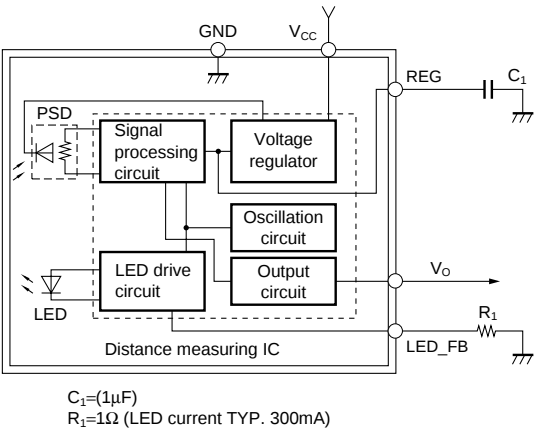


Fig.2 Timing Chart

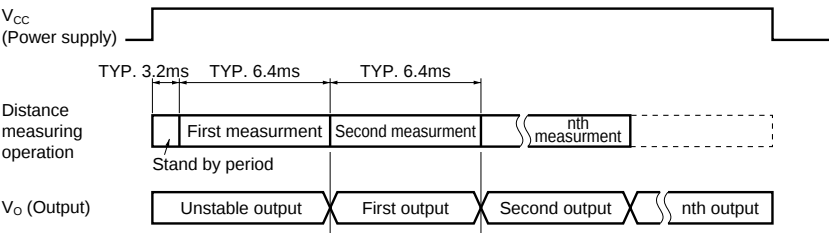
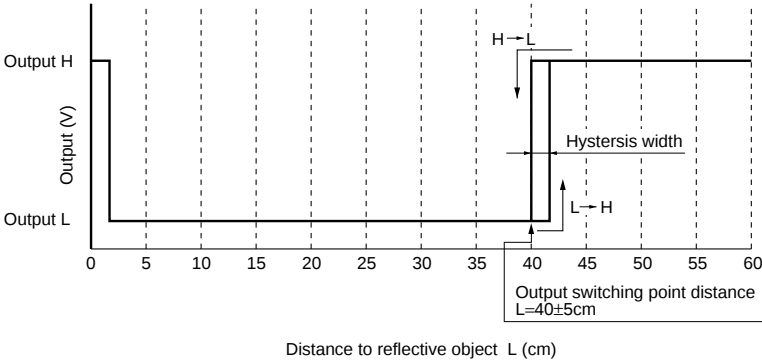


Fig.3 Distance Characteristics



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