GP2D120

General Purpose Type Distance Measuring Sensors

■ Features

1. Less influence on the color of reflective objects, reflectivity
2. Line-up of distance output/distance judgement type
   Distance output type (analog voltage) : **GP2D120**
   Detecting distance : 4 to 30cm
3. External control circuit is unnecessary

■ Applications

1. TVs
2. Personal computers
3. Amusement equipment
4. Copiers

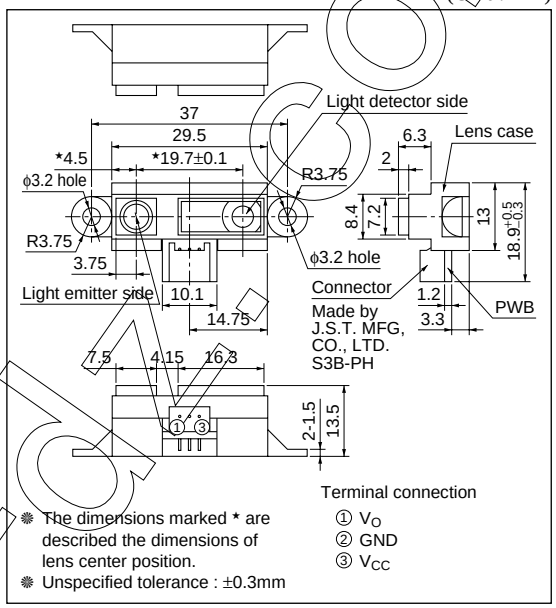
■ Absolute Maximum Ratings

(Ta=25°C, Vcc=5V)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.3 to +7	V
Output terminal voltage	V_O	−0.3 to Vcc +0.3	V
Operating temperature	T_{opr}	−10 to +60	°C
Storage temperature	T_{stg}	−40 to +70	°C

■ Outline Dimensions

(Unit : mm)



■ Recommended Operating Conditions

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

■ Electro-optical Characteristics

(Ta=25°C, V_{CC}=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Distance measuring range	ΔL	*1 *2	4	–	30	cm
Output terminal voltage	V_O	L=30cm *1	0.25	0.4	0.55	V
Difference of output voltage	ΔV_O	Output change at L=30cm to 4cm *1	1.95	2.25	2.55	V
Average Dissipation current	I_{CC}	L=30cm *1	–	33	50	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 Distance measuring range of the optical sensor system.

Fig.1 Internal Block Diagram

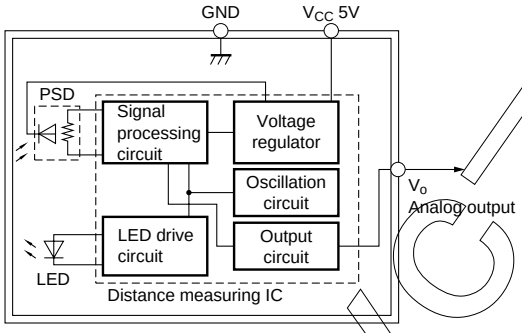


Fig.2 Timing Chart

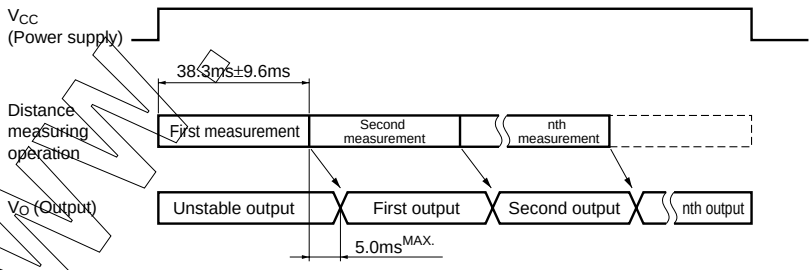


Fig.3 Analog Output Voltage vs. Surface Illuminance of Reflective Object

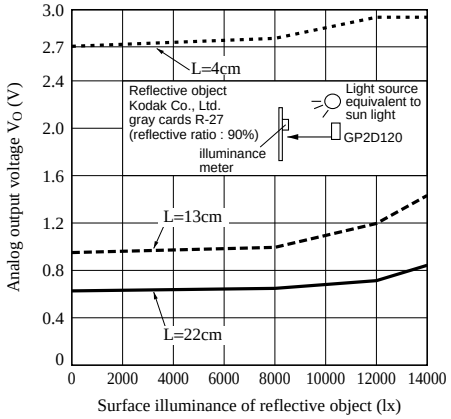


Fig.4 Analog Output Voltage vs.Distance to Reflective Object

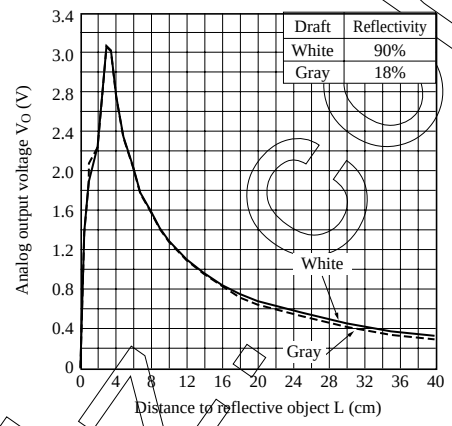


Fig.5 Analog Output Voltage vs.Ambient Temperature

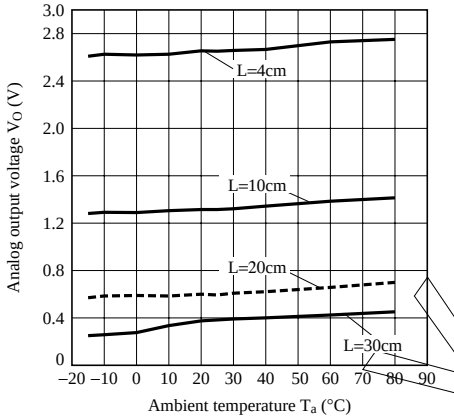
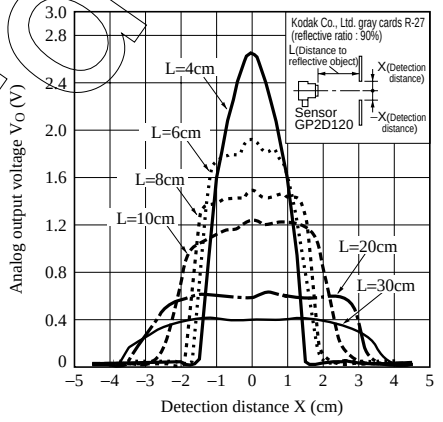


Fig.6 Analog Output Voltage vs.Detection Distance



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

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- Various safety devices, etc.

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