

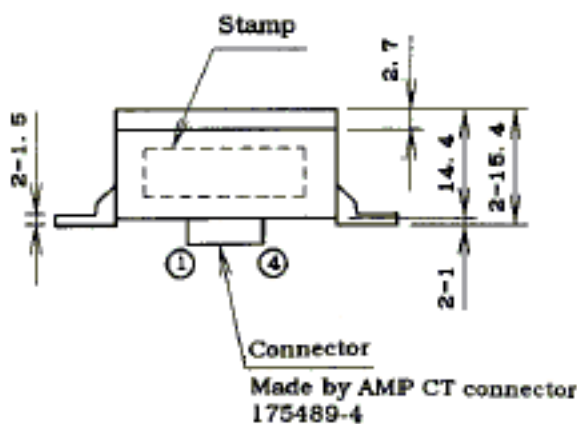
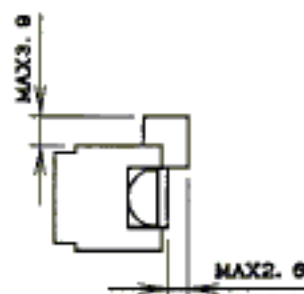
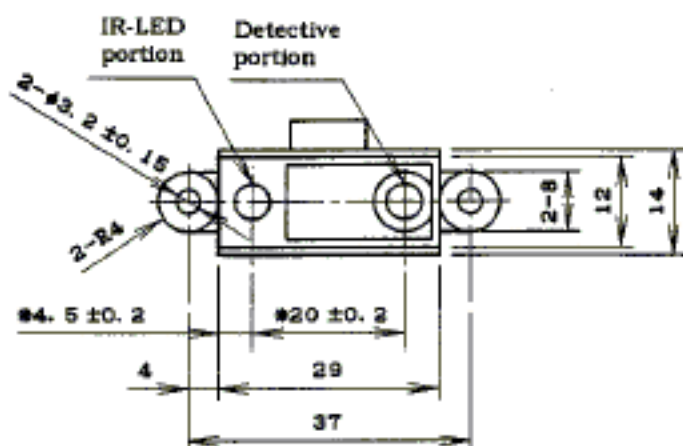
Détecteur de distance modèle GP0D021 réf. : 1001-1

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2. Outline

Unit : mm

- 1) ※ dimension shall be reference lens center.
- 2) Unspecified tolerance shall be $\pm 0.3\text{mm}$.



Connector signal

	Signal name
①	GND
②	V _{in}
③	V _{cc}
④	V _o

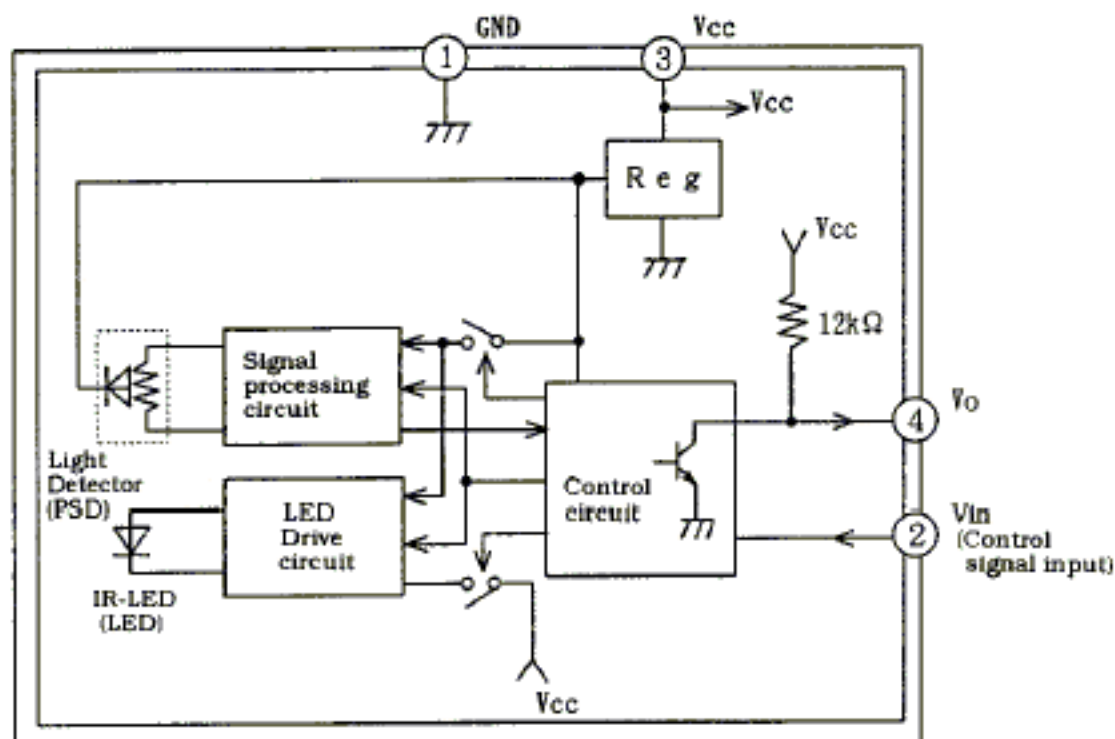
Stamp detail

SHARP
GP2D021
 Model No.

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3. Ratings and characteristics

3-1 Constitution diagram



3-2 Absolute maximum ratings

(Ta=25°C, Vcc=5V)

Parameter	Symbol	Rating	Unit	Remark
Supply voltage	Vcc	-0.3 to +10	V	
Input terminal voltage	Vin	-0.3 to +3	V	Open Drain drive input
Output terminal voltage	BVo	-0.3 to +10	V	
Operating temperature	Topr	-10 to +60	°C	
Storage temperature	Tstg	-40 to +70	°C	

• Operating Supply Voltage

Symbol	Rating	Unit	Remark
Vcc	4.4 to 7	V	

3-3 Electro-optical Characteristics

(Ta=25°C, Vcc=5V)

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Measuring distance range		ΔL	(*1)	4	-	30	cm
Output terminal voltage		V_{OH}	Output voltage at high level L=4cm (*1)	Vcc-0.3	-	-	V
		V_{OL}	Output voltage at low level L=4cm (*1)	-	-	0.3	V
Output distance characteristics		D	L=30cm (*1)	25	60	95	DEC
		ΔD	Output change at L change (30cm \rightarrow 4cm) (*1)	130	150	170	DEC
Current dissipation	Operating mode	Icc	L=4cm (*1), (*2)	-	22	35	mA
	Stand-by mode	Ioff	L=4cm (*1)	-	3	8	μA
Vin terminal current		Ivin	Vin=0V	-	-170	-280	μA

* L : Distance to reflective object

DEC : The decimal value of sensor output value (8 bit serial)

(*1) Using reflective object : White paper (Made by Kodak Co. Ltd. gray cards R-27 · white face, reflective ratio : 90%)

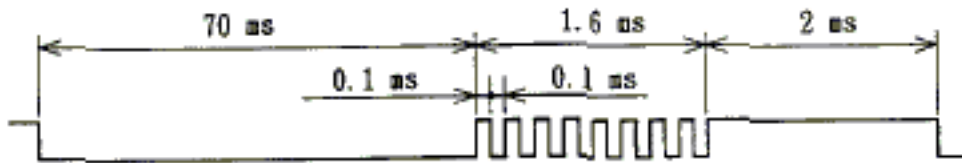
(*2) Average current dissipation value during distance measuring time when the distance is measured by Vin input signal shown in 3-4 timing chart.

(*3) Vin terminal : Open drain drive input

Drive condition : Vin off : Vin terminal current $\leq -1 \mu A$ Vin on : Vin terminal voltage $\leq 0.3V$

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3-4 Vin input signal using for measurement



3-5 Timing chart

