

T-41-73

# GP2A10

Long Focal Distance, Open Collector Output, Reflective Type OPIC Photointerrupter

## ■ Features

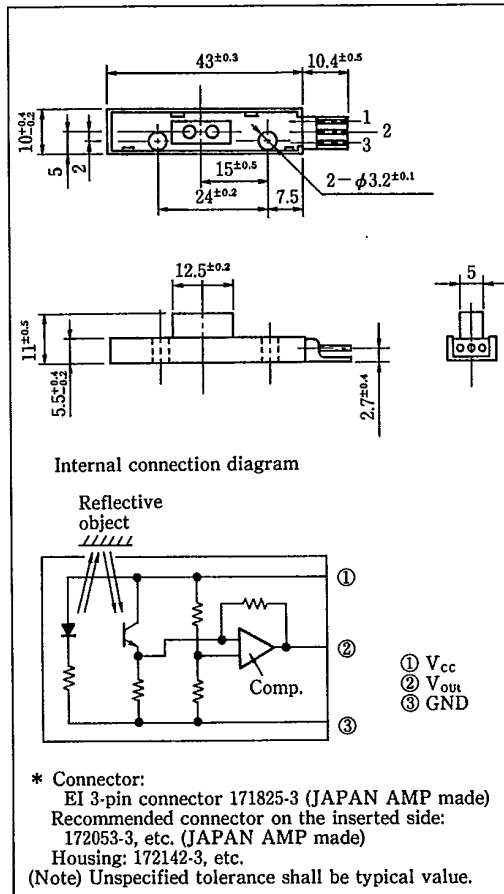
1. Long focal distance (Detecting range: 2~7mm)
2. Capable of detecting many kinds of paper (Normal paper for copiers, secondary paper, overhead projector paper)
3. Provided with a 3-pin connector for easier interface with control circuit

## ■ Applications

1. Copiers
2. Printers
3. Facsimiles

## ■ Outline Dimensions

(Unit : mm)



※ OPIC is a registered trademark of Sharp and stands for Optical IC. It has a light detecting element and signal processing circuitry integrated onto a single chip.

## ■ Absolute Maximum Ratings

(T<sub>a</sub> = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	7	V
*1 Output voltage	V <sub>o</sub>	30	V
*2 Low level output current	I <sub>OL</sub>	6	mA
*3 Operating temperature	T <sub>opr</sub>	0 ~ +65	°C
*3 Storage temperature	T <sub>stg</sub>	-40 ~ +80	°C

- \*1 Detecting time
- \*2 Non-detecting time
- \*3 The connector should be plugged in/out at normal temperature.

SHARP

Electro-optical Characteristics

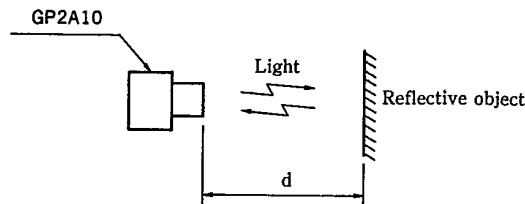
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(Ta=25°C)

Parameter	Symbol	Conditions	Rating			Unit
			MIN.	TYP.	MAX.	
Operating supply voltage	$V_{CC}$	$T_a=0\sim65^\circ\text{C}$	4.5	5.0	5.5	V
Dissipation current	$I_{CC}$	$V_{CC}=5\text{V}, R_L=\infty$ at detecting time	—	27	50	mA
Low level output voltage	$V_{OL}$	$V_{CC}=5\text{V}$ at non-detecting time $I_{OL}=3\text{mA}$	—	0.2	0.4	V
High level output voltage	$V_{OH}$	$V_{CC}=5\text{V}$ at detecting time $R_L=10\text{k}\Omega$	4.7	—	—	V
Detecting characteristics	$V_{OUT}$	*4	$V_{OL}$			—
		*5	$V_{OH}$			—
*6 Response time	$t_r$	$R_L=10\text{k}\Omega$	—	—	2	ms
	$t_f$		—	—	2	ms

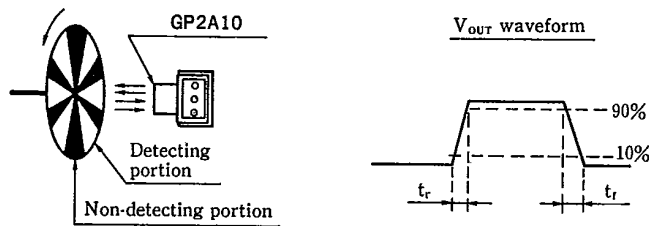
- \*4 Non-detecting condition:  $d=11\text{mm}$  or more (without external disturbing light) with suede (black) as the reflective object in Fig. 1
- \*5 Detecting condition:  $d=2\sim7\text{mm}$  (without external disturbing light) with artwork tape (black) as the reflective object in Fig. 2
- \*6 Definition of response time: shown in Fig. 2

Fig.1



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Fig. 2



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Fig. 3 Low Level Output Voltage vs. Ambient Temperature

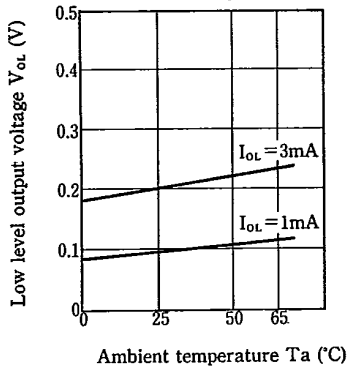


Fig. 4 Dissipation Current vs. Supply Voltage

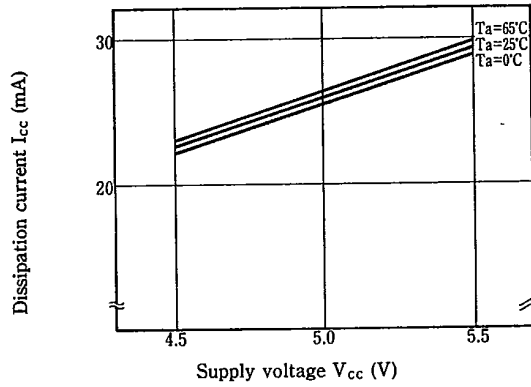
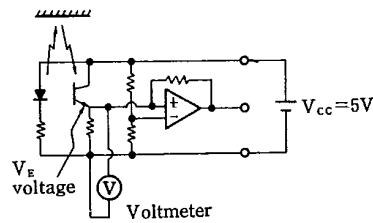
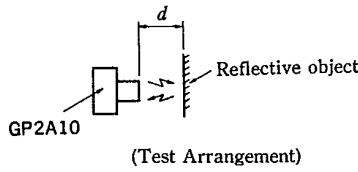
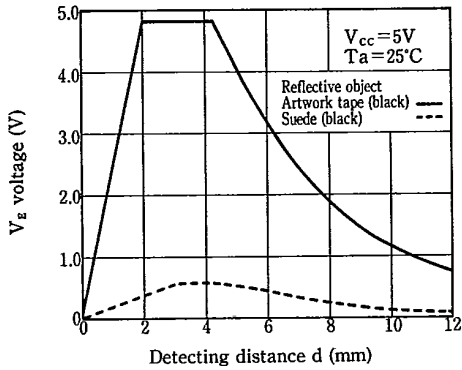


Fig. 5 Detecting Distance Characteristics



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