

T-41-73

GP2A10

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

Features

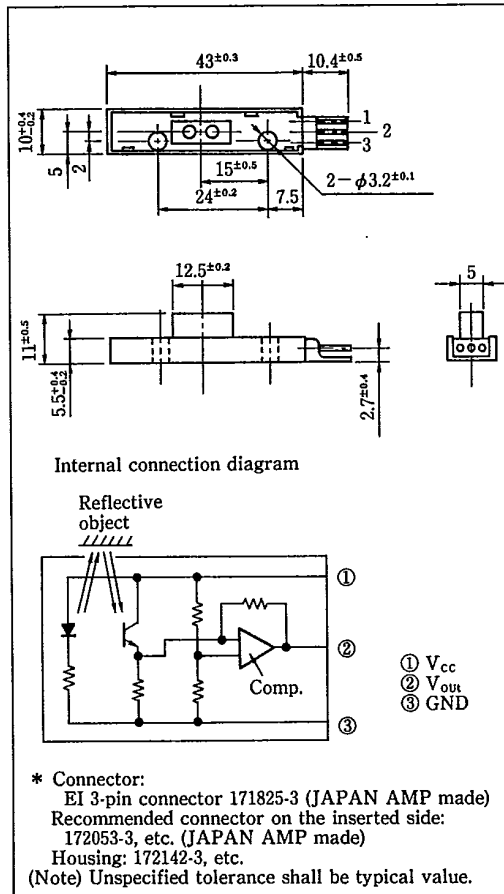
1. Long focal distance (Detecting range: 2~7mm)
2. Capable of detecting many kinds of paper (Normal paper for copiers, secondary paper, overhead projector paper)
3. Provided with a 3-pin connector for easier interface with control circuit

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

($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	7	V
*1 Output voltage	V_o	30	V
*2 Low level output current	I_{OL}	6	mA
*3 Operating temperature	T_{opr}	0 ~ +65	$^\circ\text{C}$
*3 Storage temperature	T_{stg}	-40 ~ +80	$^\circ\text{C}$

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

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

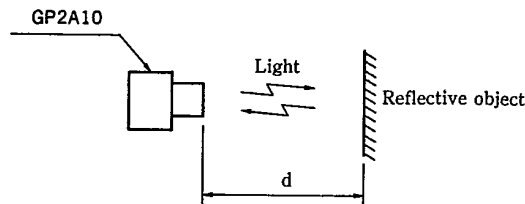
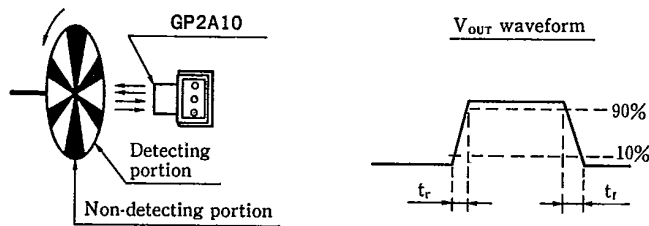


Fig. 2



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Fig. 3 Low Level Output Voltage vs. Ambient Temperature

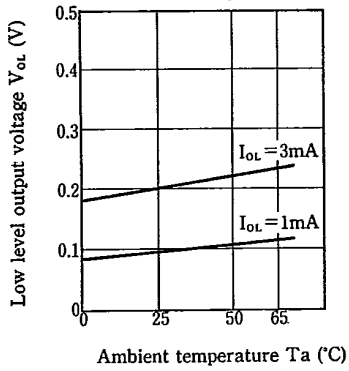


Fig. 4 Dissipation Current vs. Supply Voltage

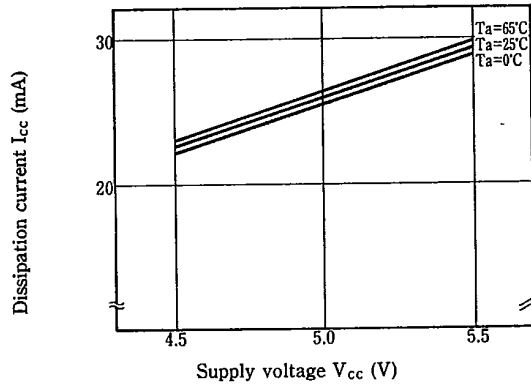


Fig. 5 Detecting Distance Characteristics

