

T-41-73

GP2A12F Long Focal Distance, Open Collector Output, Reflective Type OPIC Photointerrupter

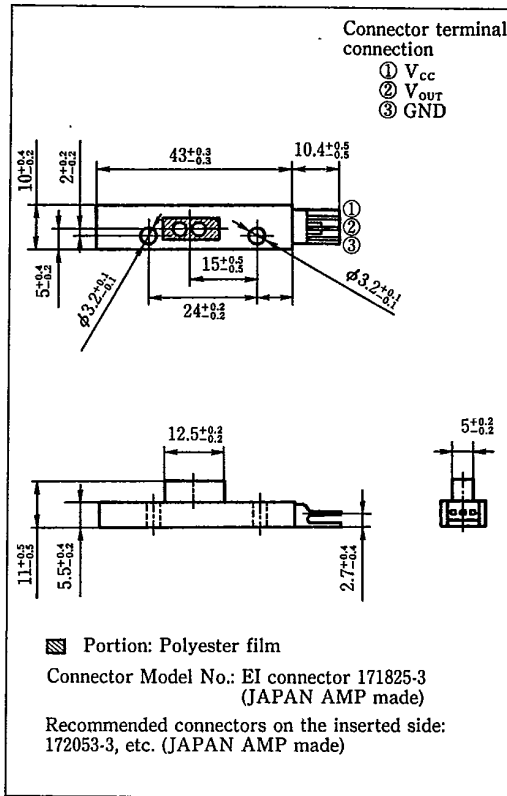
■ Features

1. Dust-proof type
2. Visible light cut-off type
3. Long focal distance type
(Detecting range: 4~5mm)
4. Capable of paper detection on platen
(Thermal paper for printers, plain paper for copiers, etc.)
5. Provided with a 3-pin connector for easier interface with control circuit

■ Applications

1. Paper detection for printers, copiers, facsimiles, etc.

■ 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°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}	-10 ~ +70	°C
*3 Storage temperature	T _{stg}	-40 ~ +80	°C

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

T-41-73

Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Supply voltage	V _{CC}	Ta = -10 ~ +70°	4.5	5.0	5.5	V
Dissipation current	I _{CC}	Detecting time V _{CC} =5V, R _L =∞	—	27	50	mA
Low level output voltage	V _{OL}	Non-detecting time V _{CC} =5V I _{OL} =3mA	—	0.2	0.4	V
High level output voltage	V _{OH}	Detecting time V _{CC} =5V R _L =10kΩ	4.7	—	—	V
Detecting characteristics	V _{OUT}	*4 Detecting condition	V _{OH}			V
		*5 Non-detecting condition	V _{OL}			V
*6 Response time	t _r	R _L =10kΩ	—	—	2.0	ms
	t _f		—	—	2.0	ms

- *4 Detecting condition: d=4.0~5.0mm (without external disturbing light) with PPC paper (white) as the reflective object in Fig. 1.
- *5 Non-detecting condition: d=4.0~5.0mm (without external disturbing light) with artwork tape (black) as the reflective object in Fig. 1.
- *6 Definition of response time: Shown in Fig. 2.

Fig. 1

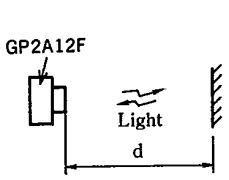
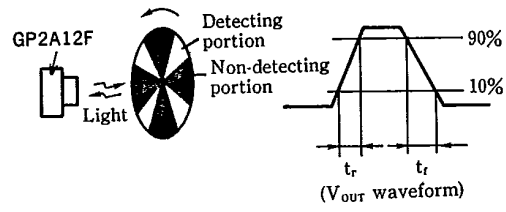
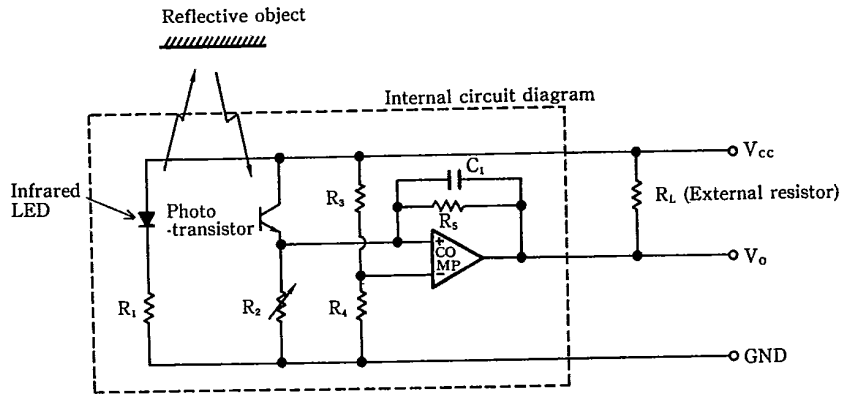


Fig. 2



(Circuit Diagram)



SHARP

Fig. 3 Low Level Output Voltage vs. Ambient Temperature

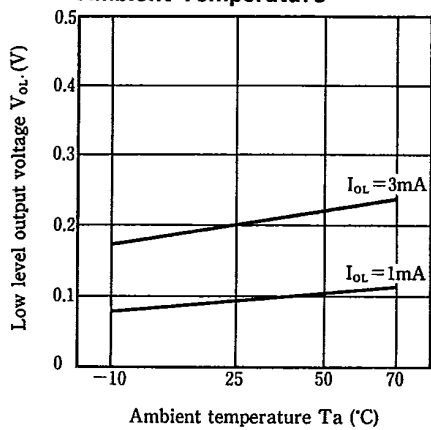


Fig. 4 Current Dissipation vs. Supply Voltage

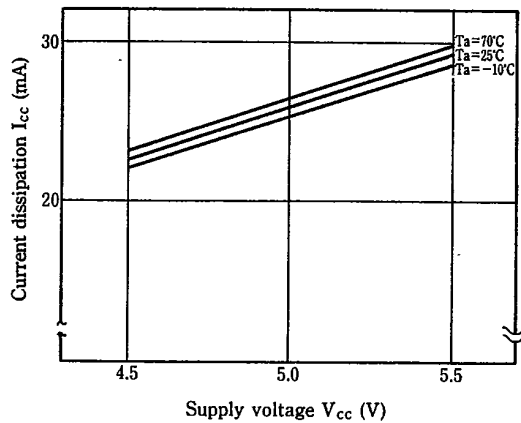


Fig. 5 Detecting Distance Characteristics

