

# GP1A72A

Small Size **OPIC** Photointerrupter  
with Connector

## ■ Features

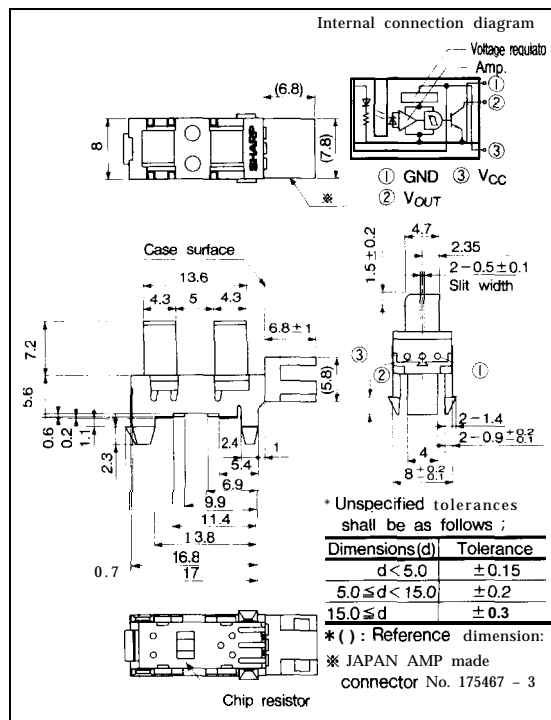
1. Compact type
2. Snap-in mounting type
3. 3-pin connector terminal



1. Copiers
2. Laser beam printers
3. Facsimiles

## ■ Outline Dimensions

(Unit : mm)



\* "OPIC"(Optical IC) is a trademark of the SHARP Corporation  
An OPIC consists of a light-detecting element and signal-processing circuit integrated onto a single chip.

## ■ Absolute Maximum Ratings (T<sub>a</sub> = 25°C )

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	-0.5 to +10	v
*1 Output voltage	V <sub>out</sub>	-0.5 to +28	v
*2 Low level output current	I <sub>OL</sub>	50	mA
Operating temperature	T <sub>opr</sub>	-20 to +75	°C
Storage temperature	T <sub>stg</sub>	-40 to +85	°C

\*1 Collector-emitter voltage of output transistor

\*2 Collector-current of output transistor

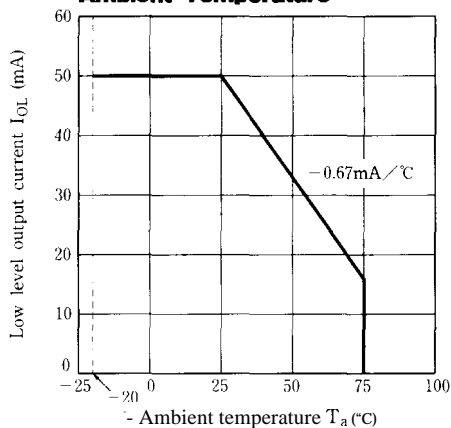
\*3 the connector should be plugged in/out and the unit's hook should be used at normal temperature

**Electro-optical Characteristics**

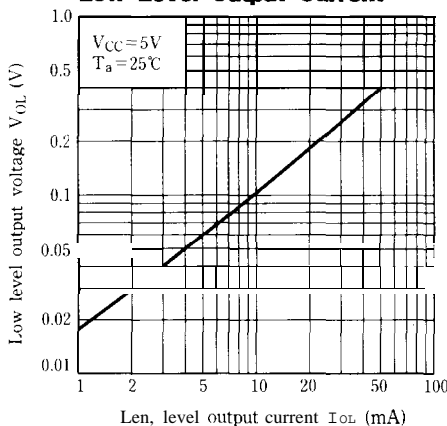
( $V_{CC}=5V, T_a = 25^{\circ}C$ )

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating supply voltage		$V_{CC}$		4.5	=	5.5	V
Low level supply current		$I_{CCL}$	Light beam uninterrupted	=	=	16.5	mA
Low level output voltage		$V_{OL}$	Light beam uninterrupted, $I_{OL}=16mA$	=	=	0.35	V
High level supply current		$I_{CCH}$	Light beam interrupted	-	=	16.5	mA
High level output voltage		$V_{OH}$	Light beam interrupted, $R_L=4.7k\Omega$	$V_{CC} \times 0.9$	-	-	V
Response characteristics	Minimum interruption time	$t_H$	$R_L = 4.7k\Omega$	166	-	-	$\mu s$
	Minimum sensing	$t_L$	$R_L = 4.7k\Omega$	166	-	-	$\mu s$

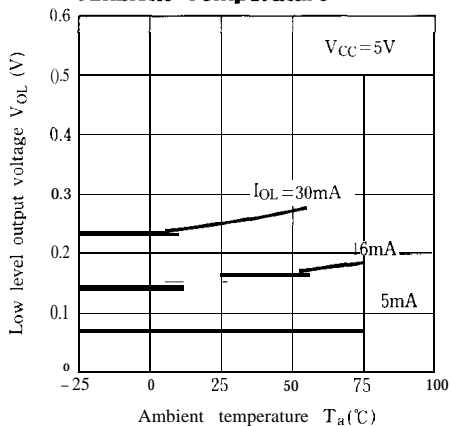
**Fig. 1 Low Level Output Current vs. Ambient Temperature**



**Fig. 2 Low Level Output Voltage vs. Low Level Output Current**



**Fig. 3 Low Level Output Voltage vs. Ambient Temperature**



**Fig. 4 Supply Current vs. Supply Voltage**

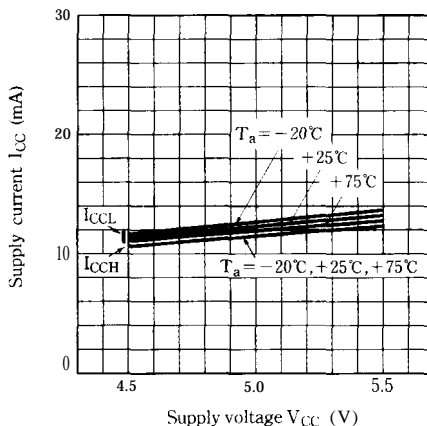


Fig. 5 Detecting Position Characteristics (1)

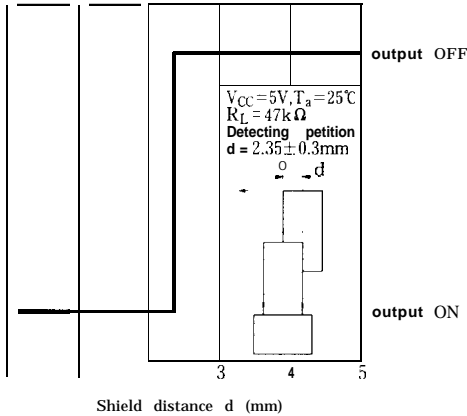
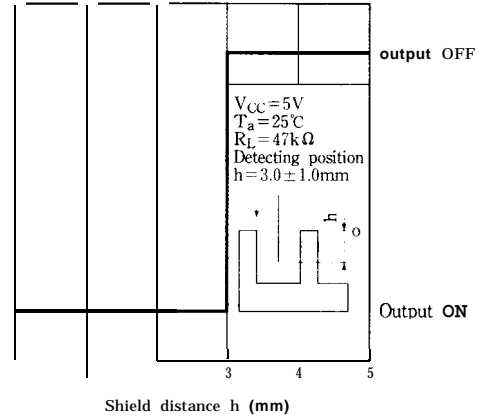
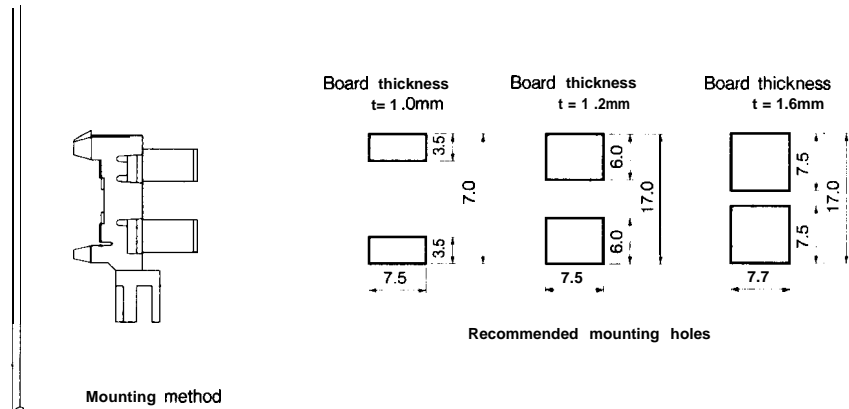


Fig. 6 Detecting Position Characteristics (2)



### ■ Recommended Mounting Holes (Unit : mm)



### ■ Precautions for Use

- (1) In this product, the PWB is fixed with a hook, and cleaning solvent may remain inside the case, therefore, dip cleaning or ultrasonic cleaning are prohibited.
- (2) Remove dust or stains, using an air blower or a soft cloth moistened in cleaning solvent. In this case, use only the following type of cleaning solvent used for wiping off :  
Ethyl alcohol, Methyl alcohol, Isopropyl alcohol  
When the cleaning solvents except for specified materials are used, please consult us.
- (3) In order to stabilize power SUPPLY line, connect a by-pass capacitor of more than  $0.01 \mu F$  between  $V_{CC}$  and GND near the device.
- (4) As for other general cautions, refer to the chapter "Precautions for Use" (Page 78 to 93).