GP1A75E

Small Size OPIC Photointerrupter with Connector

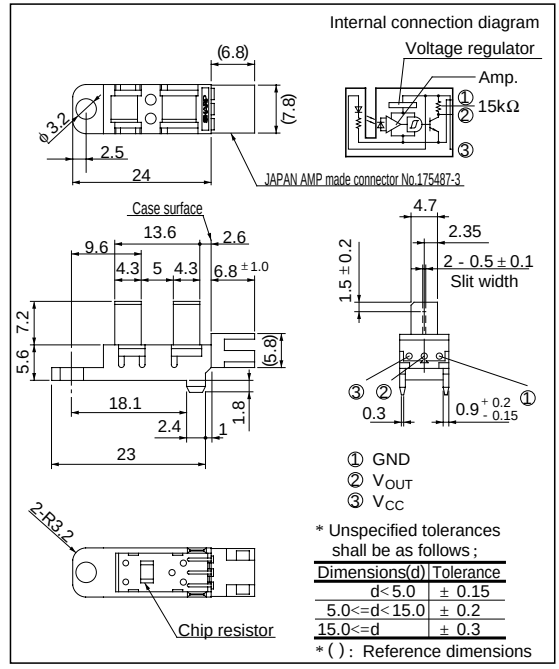
■ Features

1. 3-pin connector terminal
2. High sensing accuracy
   (Slit width: 0.5mm)
3. Wide gap between light emitter and detector (5mm)

■ Applications

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 (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	- 0.5 to + 10	V
*1 Low level output current	I_{OL}	50	mA
*2 Operating temperature	T_{opr}	- 20 to + 75	°C
*2 Storage temperature	T_{stg}	- 30 to + 85	°C

*1 Collector current of output transistor
*2 The connector should be plugged in/out and the unit's hook should be used at normal termperature.

■ Electro-optical Characteristics

(Unless otherwise specified, V_{CC} = 5V, Ta = 25˚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 interruped	-	-	20	mA
Low level output voltage		V_{OL}	Light beam interruped, I_{OL} = 16mA	-	-	0.35	V
High level supply current		I_{CCH}	Light beam uninterruped	-	-	20	mA
High level output voltage		V_{OH}	Light beam uninterruped	V_{CC} x 0.9	-	-	V
Response characteristics	Minimum interruption time	t_H	-	166	-	-	µs
	Minimum sensing time	t_L	-	166	-	-	µs

Fig. 1 Low Level Output Current vs. Ambient Temperature

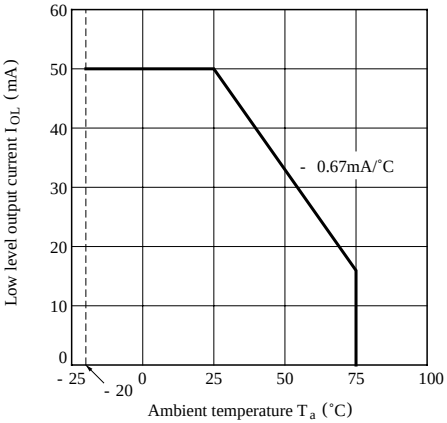


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

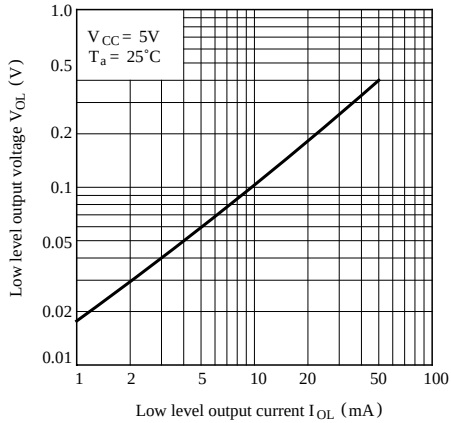


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

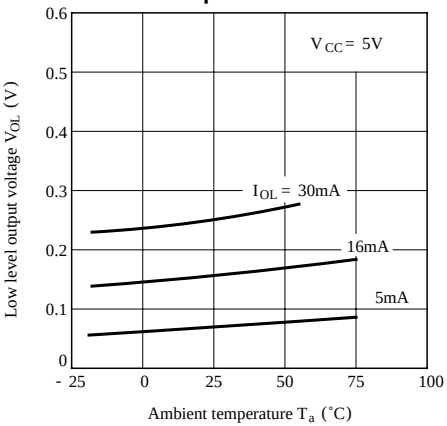


Fig. 4 Supply Current vs. Supply Voltage

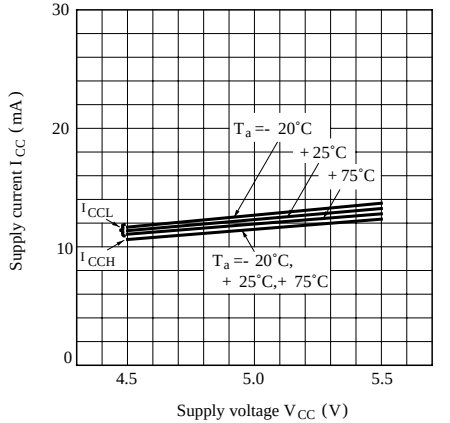


Fig. 5 Detecting Position Characteristics (1)

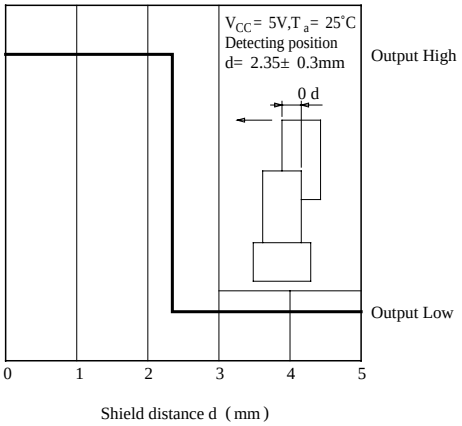
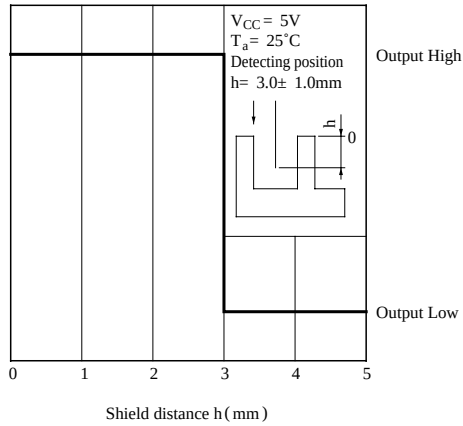
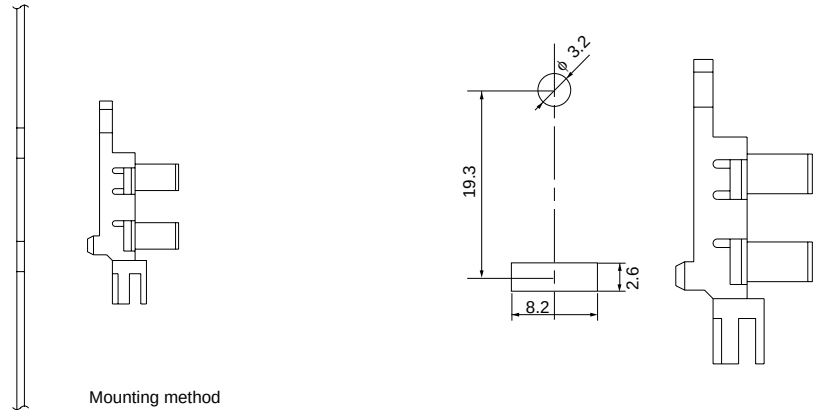


Fig. 6 Detecting Position Characteristics (2)



■ 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 0.01μF between Vcc and GND near the device.

(4) As for other general cautions, refer to the chapter "Precautions for Use".