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# GP1A75E

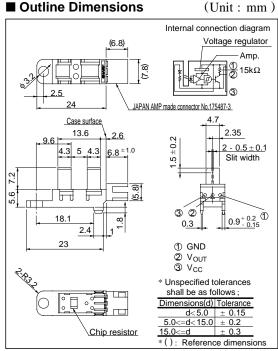
#### Features

- 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

## Small Size OPIC Photointerrupter with Connector



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

■ Absolute Maximum Ratings	(Ta= 25°C)
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Parameter	Symbol	Rating	Unit
Supply voltage	Vcc	- 0.5 to + 10	V
*1 Low level output current	Iol	50	mA
*2Operating temperature	T <sub>opr</sub>	- 20 to + 75	°C
*2 Storage temperature	T <sub>stg</sub>	- 30 to + 85	°C

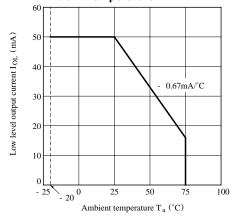
\*1 Collector current of output transistor

\*2 The connector should be plugged in/out and the unit's hook should be used at normal termperature.

<sup>44</sup> In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that occur in equipment using any of SHARP's devices, shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest version of the device specification sheets before using any SHARP's device."

Electro-optical Characteristics			(Unless otherwise specified, $V_{cc} = 5V, Ta = 25^{\circ}C$ )						
Parameter	Parameter		Conditions	MIN.	TYP.	MAX.	Unit		
Operating supply voltage	Operating supply voltage		-	4.5	-	5.5	V		
Low level supply current	Low level supply current		Light beam interruped	-	-	20	mA		
Low level output voltag	Low level output voltage		Light beam interruped, I OL= 16mA	-	-	0.35	V		
High level supply current	High level supply current		Light beam uninterruped	-	-	20	mA		
High level output voltage		Voh	Light beam uninterruped	V cc x 0.9	-	-	V		
Response	Minimum interruption time	t <sub>H</sub>	-	166	-	-	μs		
characteristics	Minimum sensing time	tL	-	166	-	-	μs		

Fig. 1 Low Level Output Current vs. Ambient Temperature





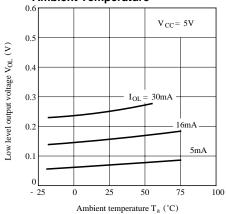


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

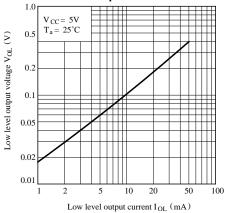
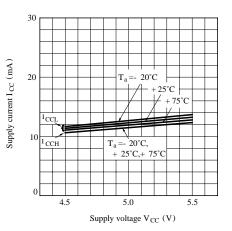


Fig. 4 Supply Current vs. Supply Voltage

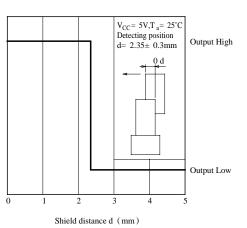


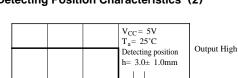
Output Low

5

<u>-</u>|0

#### Fig. 5 Detecting Position Characteristics (1)





Shield distance h(mm)

3

4

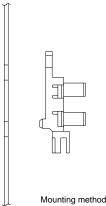
2

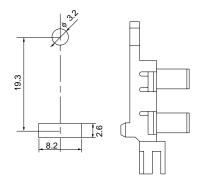
1

0

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 Vcc and GND near the device.
- (4) As for other general cautions, refer to the chapter" Precautions for Use".

#### Fig. 6 Detecting Position Characteristics (2)