

GP1A05HR/GP1A22HR

OPIC Photointerrupter with Connector

■ Features

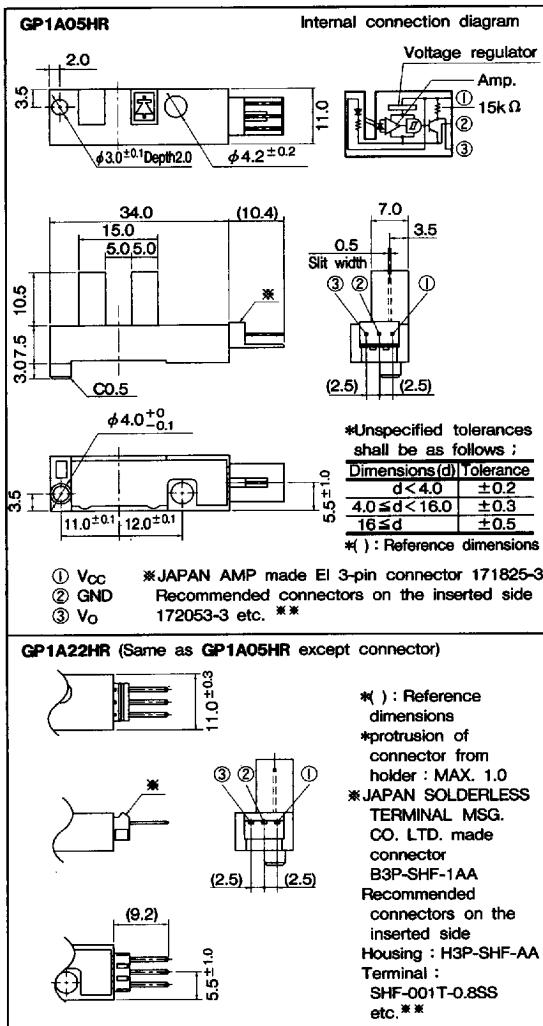
1. 3-pin connector-terminal
2. High sensing accuracy (Slit width : 0.5mm)
3. Wide gap between light emitter and detector (5mm)

■ Applications

1. Copiers
2. 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.

** Recommended connectors on the inserted side are shown on the page after next.

8180798 0011966 237

■ **Absolute Maximum Ratings** ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	-0.5 to 8	V
*1 Low level output current	I_{OL}	50	mA
*2 Operating temperature	T_{opr}	-20 to +75	$^\circ\text{C}$
*2 Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

*1 Collector current of output transistor

*2 The connector should be plugged in/out at normal temperature.

■ **Electro-optical Characteristics**

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

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 interrupted	—	—	30	mA
Low level output voltage	V_{OL}	Light beam interrupted, $I_{OL} = 16\text{mA}$	—	—	0.4	V
High level supply current	I_{CCH}	Light beam uninterrupted	—	—	30	mA
High level output voltage	V_{OH}	Light beam uninterrupted	$V_{CC} \times 0.9$	—	—	V
*4 Response Frequency	f	*3	—	—	3 000	Hz

*3 NO DC output is allowed.

*4 Response frequency is measured with the disk shown below being rotated. (Unit : mm)

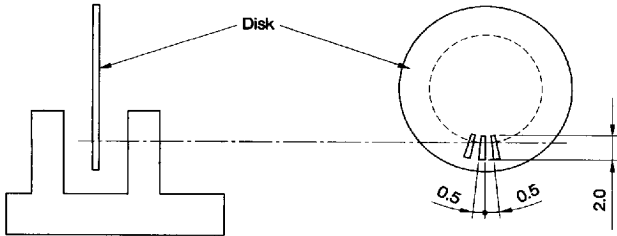


Fig.1 Low Level Output Current vs. Ambient Temperature

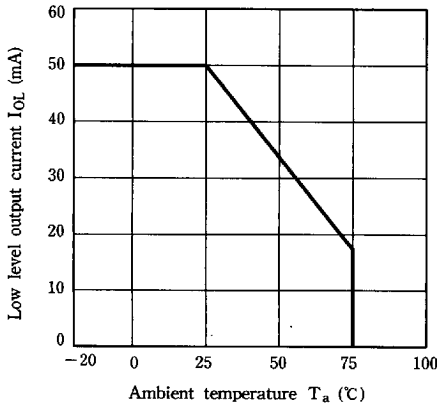


Fig.2 Low Level Output Voltage vs. Low Level Output Current

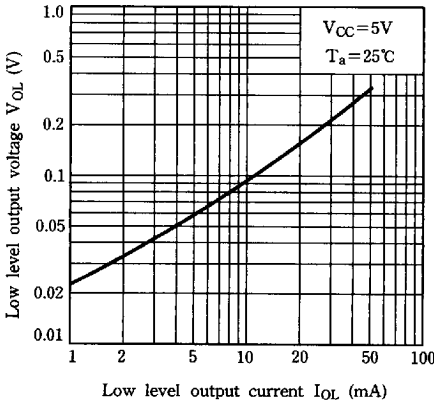
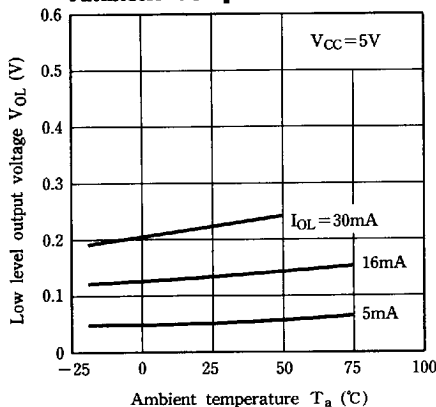
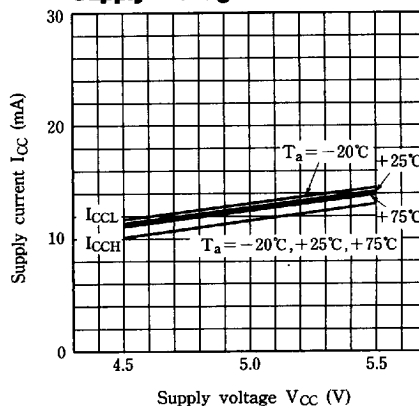
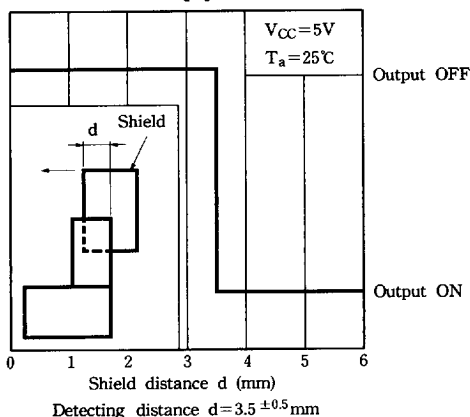
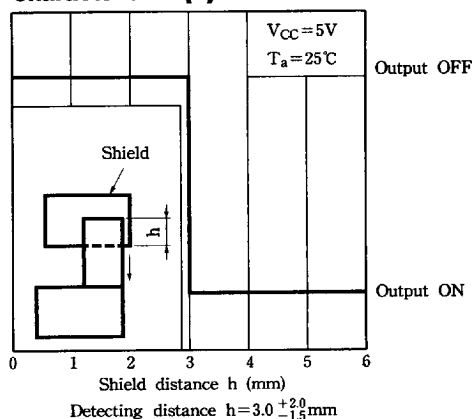


Fig. 3 Low Level Output Voltage vs. Ambient Temperature**Fig. 4 Supply Current vs. Supply Voltage****Fig. 5 Detecting Position Characteristics (1)****Fig. 6 Detecting Position Characteristics (2)****Recommended Connectors on the Inserted Side**

Recommended connector for GP1A05HR is same as GP1A05's.

Recommended connector for GP1A22HR is same as GP1A23LC's.

(Refer to page 667.)

Precautions for Use

- (1) It is recommended that a by-pass capacitor of more than $0.01 \mu F$ be added between V_{CC} and GND near the device in order to stabilize power supply line.
- (2) In this product, the PWB is fixed with a resin cover, and cleaning solvent may remain inside the case; therefore, dip cleaning or ultrasonic cleaning is prohibited.
- (3) Remove dust or stains, using an air blower or a soft cloth moistened in cleaning solvent. However, do not perform the above cleaning using a soft cloth with cleaning solvent in the marking portion.

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 expect for specific materials are used, please consult us.

- (4) As for other general cautions, refer to the chapter "Precautions for Use". (Page 78 to 93)