

GP1A38L5/GP1A38L7

Multi-channel OPIC Photointerrupter with Connector

■ Features

- Multi-channel type
GP1A38L5 (5-channel type)
GP1A38L7 (7-channel type)
- Built-in Schmidt trigger circuit
- LSTTL and TTL compatible output
- Can be mounted with screws

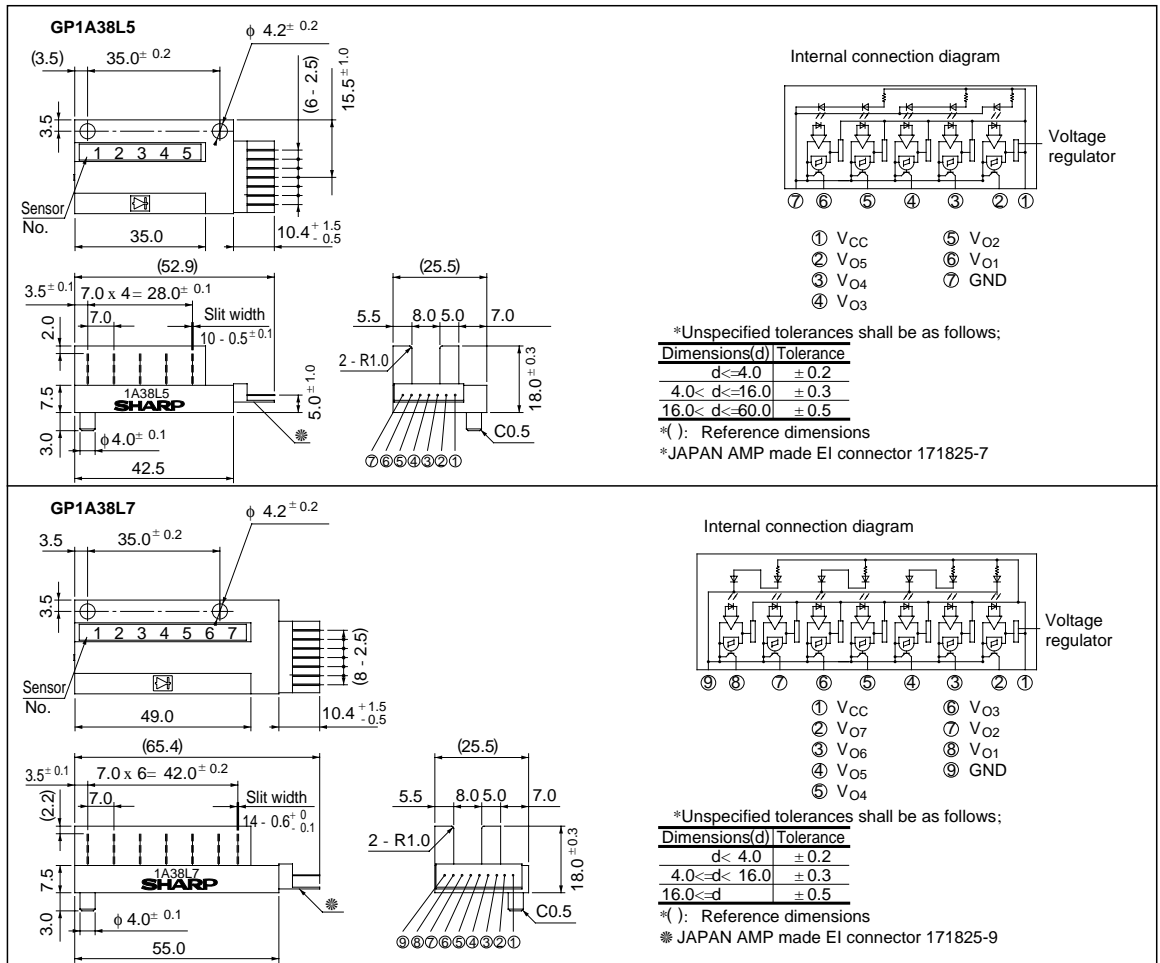
■ Applications

- Laser beam printers
- Copiers

**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.

■ Outline Dimensions

(Unit : mm)



Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{CC}	- 0.5 to + 7	V
Output voltage	V _O	28	V
Output current	I _{OL}	50	mA
*1 Operating temperature	T _{opr}	- 20 to + 75	°C
*1 Storage temperature	T _{stg}	- 40 to + 85	°C

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

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 uninterrupted	GP1A38L5	-	-	80	mA
			GP1A38L7	-	-	110	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	GP1A38L5	-	-	80	mA
			GP1A38L7	-	-	110	mA
High level output voltage	V _{OH}	Light beam interrupted, *2R _L = 47kΩ	V _{CC} × 0.9	-	-	V	
Response frequency	f	R _L = 47kΩ	-	-	3 000	Hz	

*2 Connects between V_{CC} and output terminal.

Fig. 1 Low Level Output Current vs. Ambient Temperature

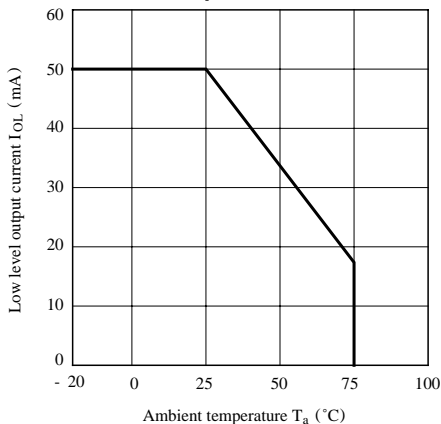


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

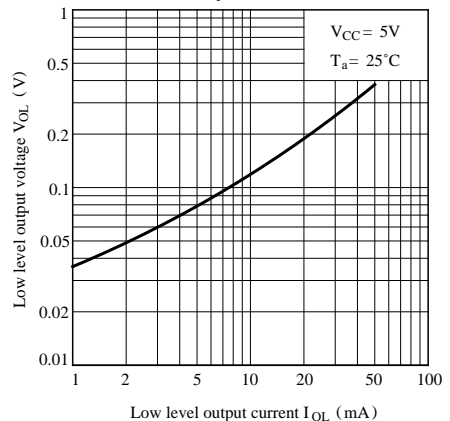


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

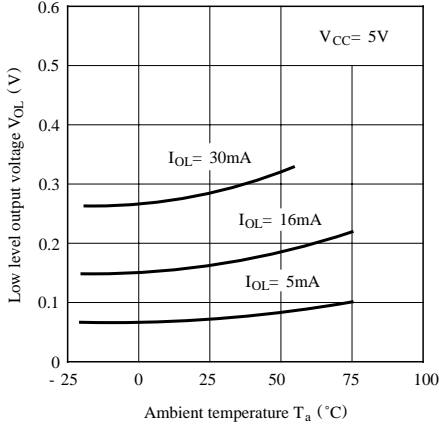


Fig.4-a Supply Current vs. Supply Voltage (GP1A38L5)

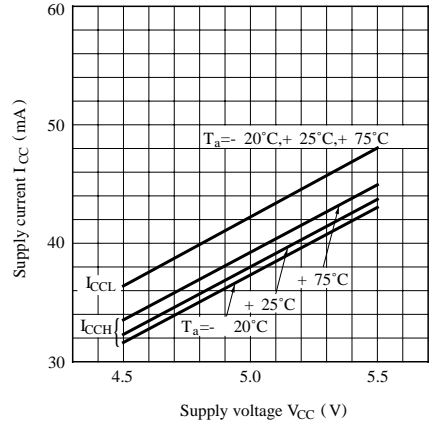


Fig.4-b Supply Current vs. Supply Voltage (GP1A38L7)

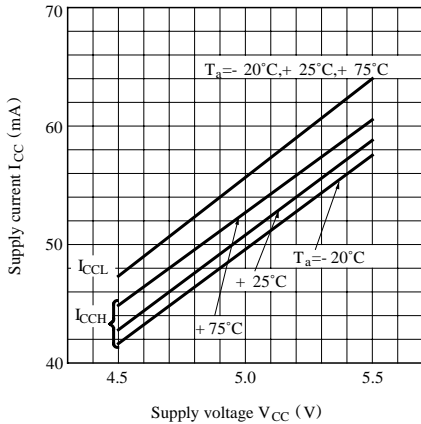


Fig.5-a Detecting Position Characteristics (1) (GP1A38L5)

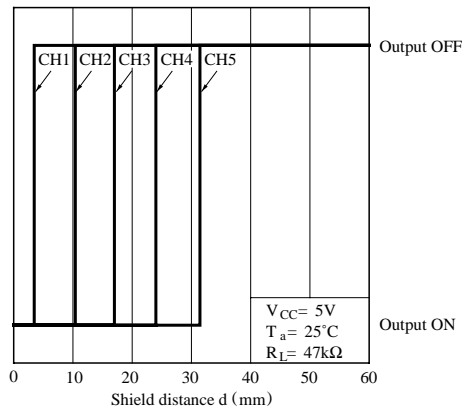
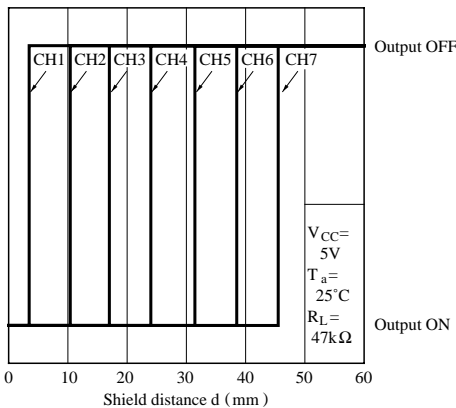
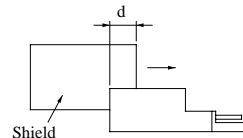


Fig.5-b Detecting Position Characteristics (1) (GP1A38L7)



Measuring Method for Detecting Position Characteristics (1)



GP1A38L5

CH	Detecting distance d
1	$3.5 \pm 0.5mm$
2	$10.5 \pm 0.5mm$
3	$17.5 \pm 0.5mm$
4	$24.5 \pm 0.5mm$
5	$31.5 \pm 0.5mm$

GP1A38L7

CH	Detecting distance d
1	$3.5 \pm 0.5mm$
2	$10.5 \pm 0.5mm$
3	$17.5 \pm 0.5mm$
4	$24.5 \pm 0.5mm$
5	$31.5 \pm 0.5mm$
6	$38.5 \pm 0.5mm$
7	$45.5 \pm 0.5mm$

Fig.6-a Detecting Position Characteristics (2)
(GP1A38L5)

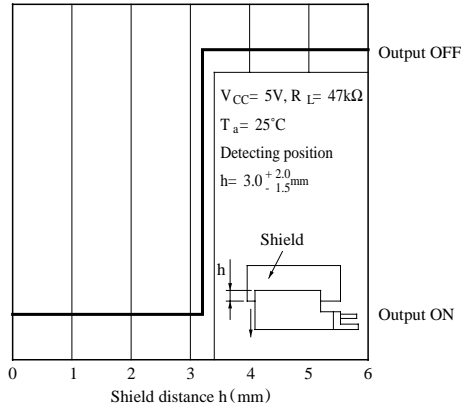
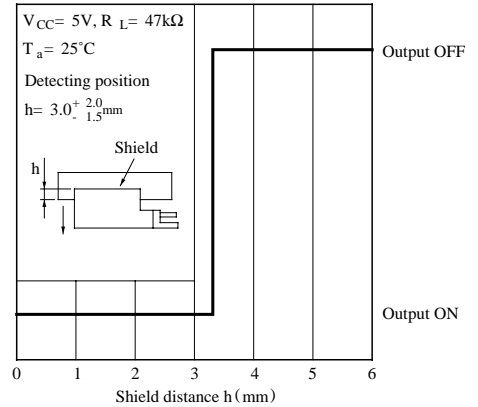


Fig.6-b Detecting Position Characteristics (2)
(GP1A38L7)



■ Precautions for Use

- (1) 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 are prohibited.
- (2) 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 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".