GP1A34LC

OPIC Photointerrupter with Connector

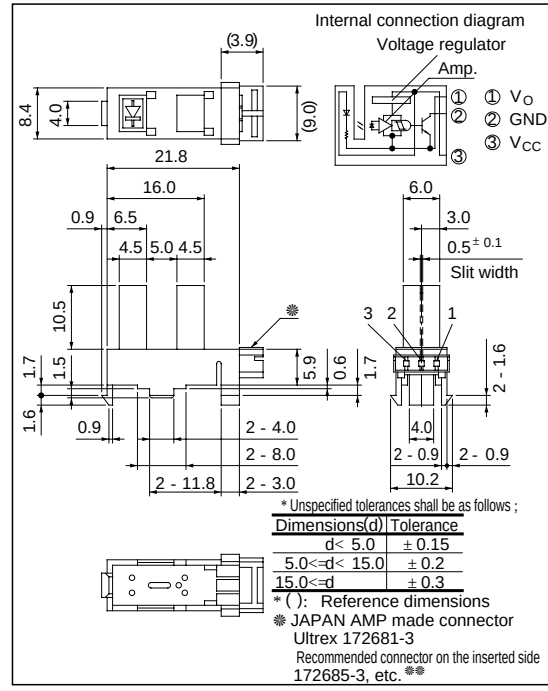
■ Features

1. Snap-in mounting type
2. Can be mounted on 2 different thickness boards (1.0mm, 1.6mm).
3. Uses 3-pin connector terminal
4. High sensing accuracy (Slit width: 0.5mm)
5. Wide gap between light emitter and detector (5mm)

■ Applications

1. Copiers, printers, 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.

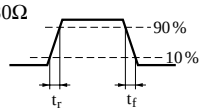
■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	- 0.5 to + 7	V
*1 Output voltage	V_O	- 0.5 to + 13	V
*2 Low level output current	I_{OL}	10	mA
*3 Operating temperature	T_{opr}	- 20 to + 75	°C
*3 Storage temperature	T_{stg}	- 30 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, 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	-	-	30	mA
Low level output voltage		V_{OL}	Light beam uninterrupted, I_{OL}= 2.5mA	-	-	0.4	V
High level supply current		I_{CCH}	Light beam interrupted	-	-	30	mA
High level output voltage		V_{OH}	Light beam interrupted, R_L= 47kΩ	V_{CC} x 0.9	-	-	V
*5 Response frequency		f	*4 R_L= 47kΩ,	-	-	3 000	Hz
Response time	Rise time	t_r	R_L= 280Ω 	-	0.1	0.5	μs
	Fall time	t_f		-	0.05	0.5	μs

*4 Output should not be DC level

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

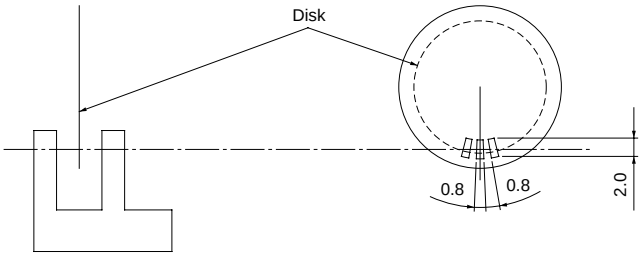


Fig. 1 Low Level Output Current vs. Ambient Temperature

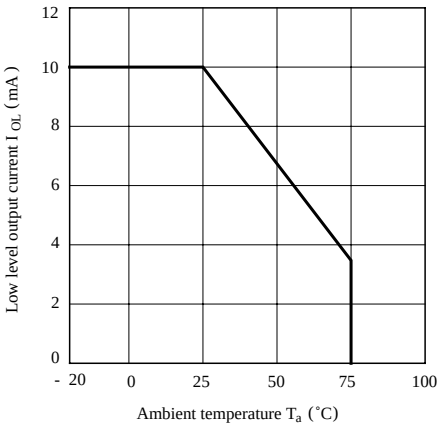


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

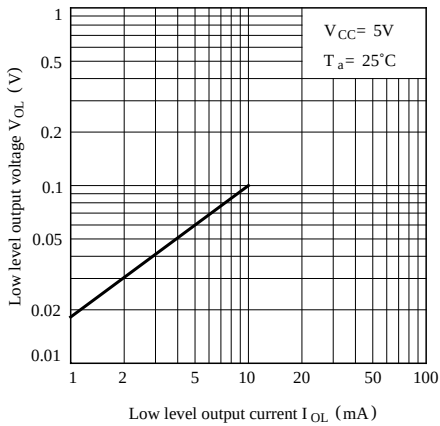


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

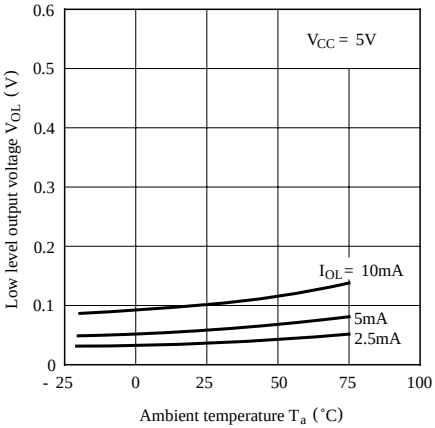


Fig. 4 Supply Current vs. Supply Voltage

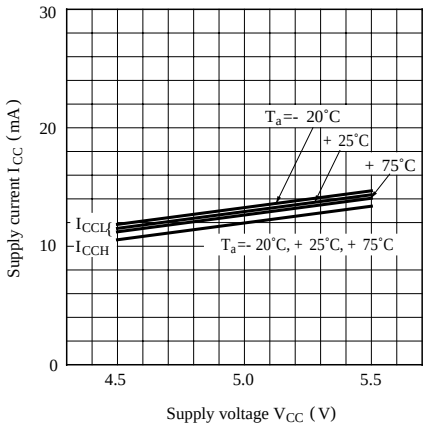
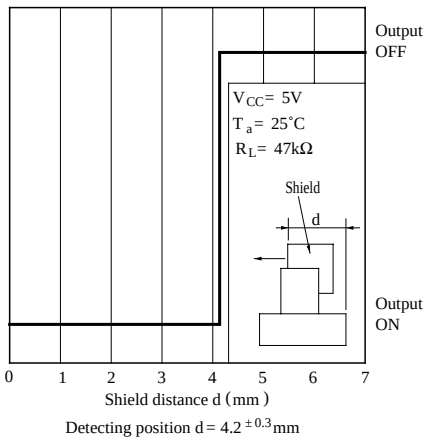
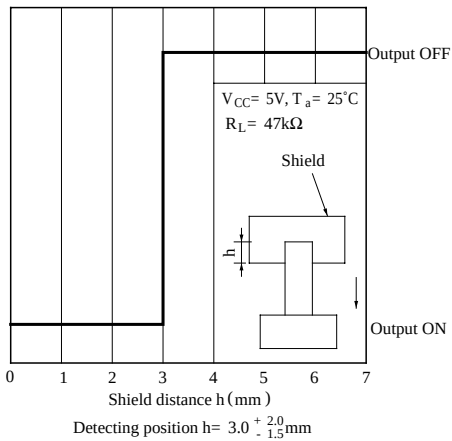


Fig. 5 Detecting Position Characteristics (1)



Detecting position d= $4.2^{\pm 0.3}$mm

Fig. 6 Detecting Position Characteristics (2)



Detecting position h= $3.0^{+2.0}_{-1.5}$mm

■ Recommended Connentors on the Inserted Side

● JAPAN AMP made Ultrex connector (Solderless type)

Housing Model No.	172677-3			
Special terminal Model No.	AWG size	Product shape	Material	Model No.
	AWG 30 to 26	Chain	Copper phosphide	171609-1
		Bulk		171611-1
	AWG 26 to 22	Chain		171610-1
		Bulk		171612-1

● JAPAN AMP made Ultrex connector (mass termination type)

172685-3

■ Recommended Mounting Holes

Same as **GP1S09**

■ 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 slovent. However, do not perform the above cleaning using a soft cloth with cleaning solvent in the marking portion.
In this case, use only the follwing 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".