

GP1AQ36L

High Temperature Operation Type **OPIC** Photointerrupter with Connector

■ Features

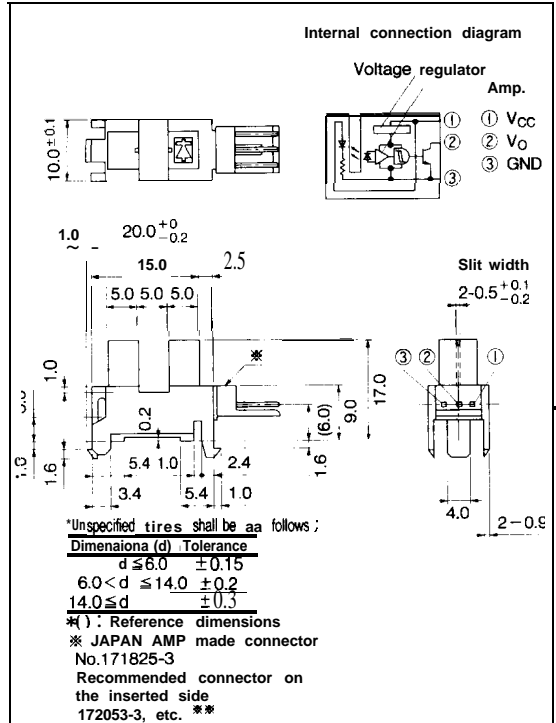
1. Capable of operation at high temperature (Operating temperature: 90°C MAX.)
2. Snap-in mounting type
3. Can be mounted on 2 different thickness boards (1.0mm,1.2mm)
4. Uses 3-pin connector terminal

■ Applications

1. Copiers, laser beam printers
2. Facsimiles
3. FA equipment

■ Outline Dimensions

(Unit : mm)



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

*"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 Output voltage	V _O	-0.5 to +28	v
*2 Low level output current	I _{OL}	50	mA
*3 Operating temperature	T _{opr}	-25 to +90	°C
*3 Storage temperature	T _{stg}	-40 to +90	°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**

($T_a = 25^\circ\text{C}$)

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 uninterrupted	—	—	16.5	mA
Low level output voltage		V_{OL}	Light beam uninterrupted, $I_{OL} = 16\text{mA}$	—		0.35	v
High level supply current		I_{CCH}	Light beam interrupted			16.5	mA
High level output voltage		V_{OH}	Light beam interrupted, $R_L = 47\text{k}\Omega$	$V_{CC} \times 0.9$	—	—	v
Response characteristics	Minimum light interrupt time	t_H	$R_L = 4.7\text{k}\Omega$	166	—		μs
	Minimum light un-interrupt time	t_L		166	—	—	μs

Fig. 1 Low Level Output Current vs. Ambient Temperature

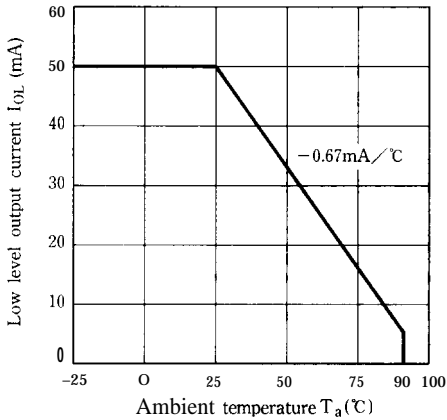


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

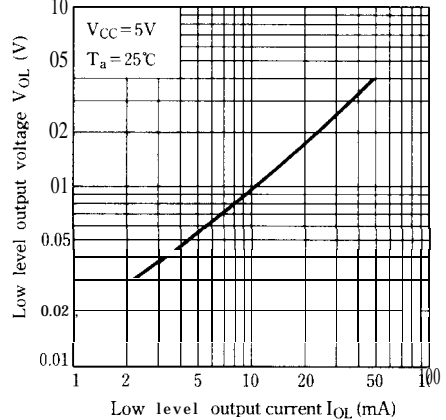


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

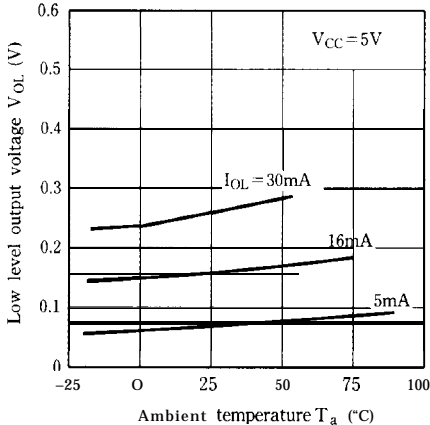


Fig. 4 Supply Current vs. Supply Voltage

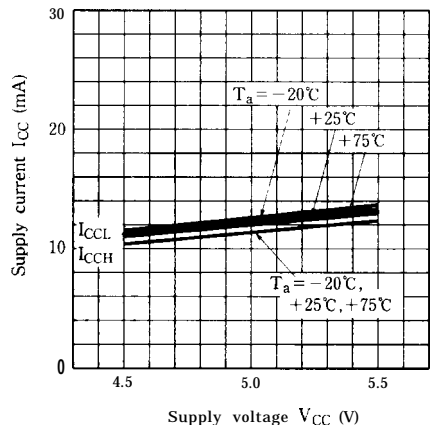
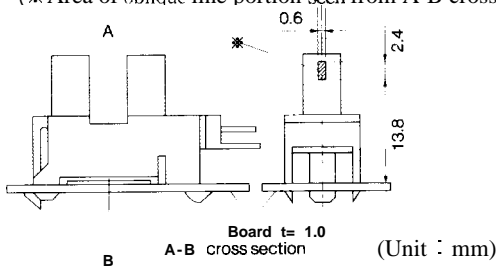
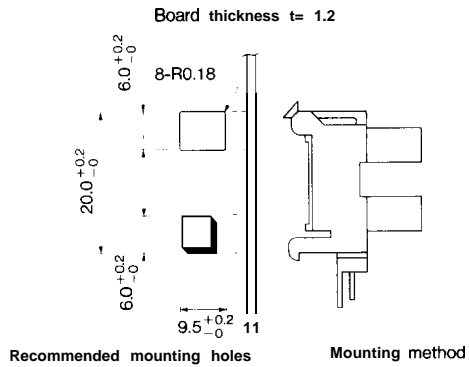
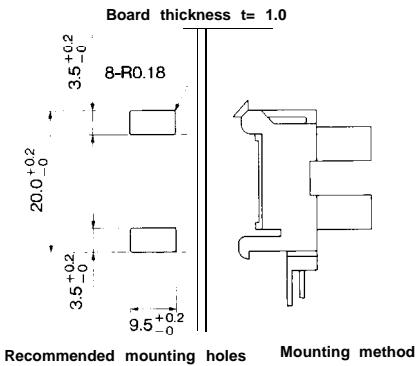


Fig. 5 Detection Area

(※ Area of oblique line portion seen from A-B cross section)



Recommended Mounting Holes



Recommended Connectors on the Inserted Side

● JAPAN AMP made EI series connectors (standard type)

Housing color	Natural color	Black	Blue	Green	Red
Housing Model No.	171822-3	2-17187-3	4-111822-3	6-171822-3	8-171822-3
Special terminal Model No.	AWG size	Product shape	Material	Model No.	
	AWG 26 to 20	Bulk	Brass	170204-1	
			Copper phosphide	170204-2	
		Chain	Brass	1702621	
			Copper phosphide	170262-2	
	AWG 30 to 26	Bulk	Brass	170205-1	
Copper phosphide			170205-2		
Chain		Brass	170263-1		
		Copper phosphide	170263-2		

● JAPAN AMP made EI series connectors (low profile type)

Housing color	Natural color	Black	Blue	Green	Red
Housing Model No.	172142-3	2172147-3	4-172142-3	6-172142-3	8-172142-3
Special terminal Model No. (Material: Copper phosphide)	AWG size	Product shape	Model No.		
	26 to 22	Bulk	170369-1		
		Chain	170354-1		
		Bulk	170370-1		
30 to 26	Chain	170355-1			

● JAPAN AMP made EI series connectors (amp mass terminating)

Housing terminal united type connector	AWG28 (Green)	AWG26 (Natural [O])	AWG24 (Black)	AWG22 (Red)
	172054-3	172053-3	172052-3	172051-3

※ Terminal Material : Copper phosphide

Precautions for Use

- In order to stabilize power supply line, connect a by-pass capacitor of more than 0.01 μF between V_{CC} and GND near device.
- As for other cautions, refer to the chapter "Precaution for Use" (Page 78 to 93).

Photointerrupters

