

GP1AQ36L

High Temperature Operation Type OPIC Photointerrupter with Connector

■ Features

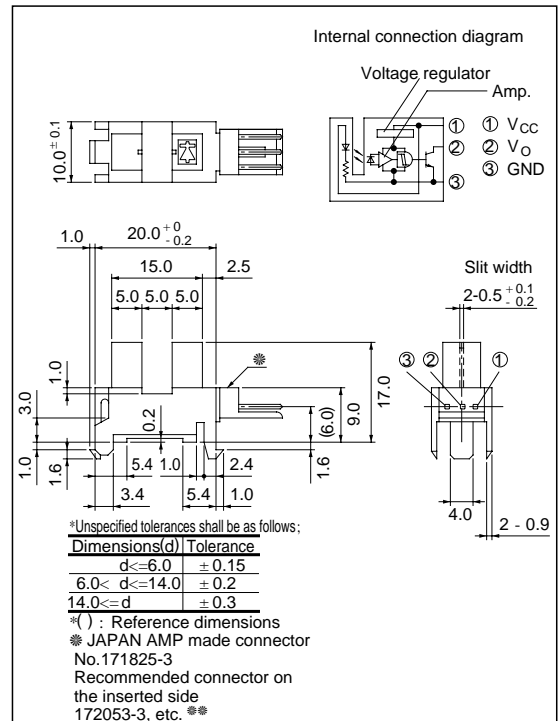
1. Capable of operation at high temperature
(Operating temperature: 90°C MAX.)
2. Snap-in mounting type
3. Can be mounted on 2 different thickness boards (1.0mm, 1.2mm)
4. Uses 3-pin connector terminal

■ 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

(T_a = 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

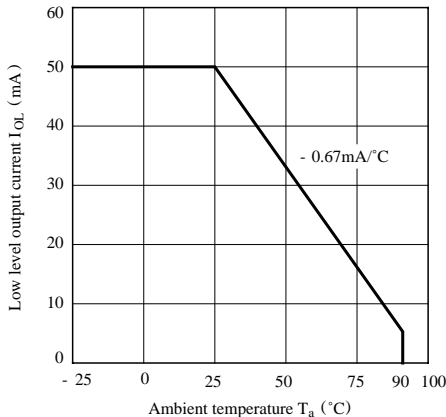


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

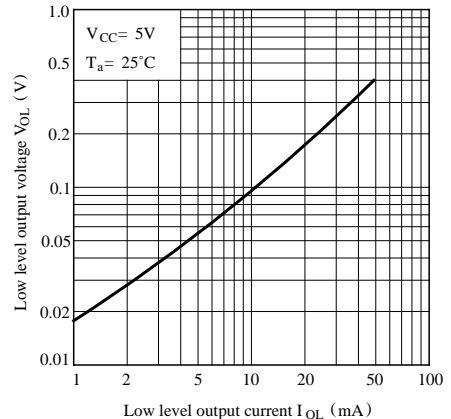


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

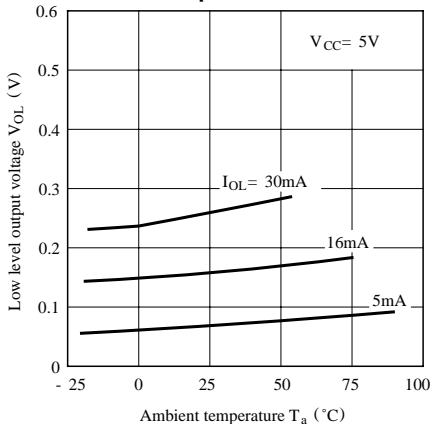


Fig. 4 Supply Current vs. Supply Voltage

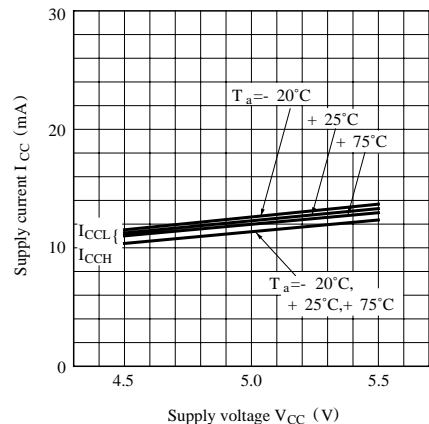
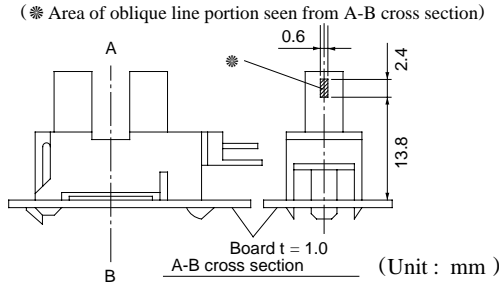
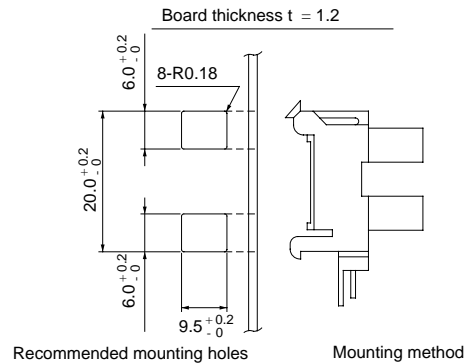
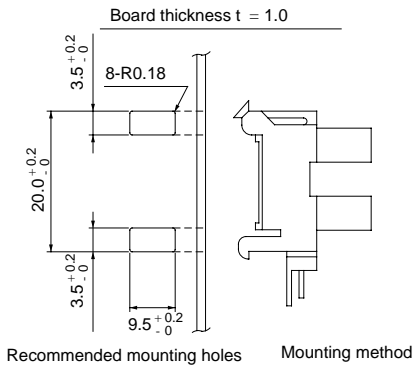


Fig. 5 Detection Area



■ 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	2-171822-3	4-171822-3	6-171822-3	8-171822-3
Special terminal Model. No.	AWG size	Product shape	Material	Model No.	
			Brass	170204-1	
	Bulk	Copper phosphide		170204-2	
			Brass	170262-1	
	Chain	Copper phosphide		170262-2	
			Brass	170205-1	
	Bulk	Copper phosphide		170205-2	
			Brass	170263-1	
Chain	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	2-172142-3	4-172142-3	6-172142-3	8-172142-3
Special terminal Model. No. (Material : Copper phosphide)	AWG size	Product shape		Model No.	
		Bulk		170369-1	
	26 to 22	Chain		170354-1	
		AWG size 30 to 26	Bulk		170370-1
Chain			170355-1		

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

Housing-terminal united type connector	AWG28 (Green)	AWG26 (Natural color)	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 $0.01\mu\text{F}$ between V_{CC} and GND near device.
- As for other cautions, refer to the chapter "Precaution for Use".

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 - Industrial control
 - Audio visual equipment
 - Consumer electronics
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 - Traffic signals
 - Gas leakage sensor breakers
 - Alarm equipment
 - Various safety devices, etc.
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