

# GP1A10/GP1A26LC

## OPIC Photointerrupter with Connector

### Features

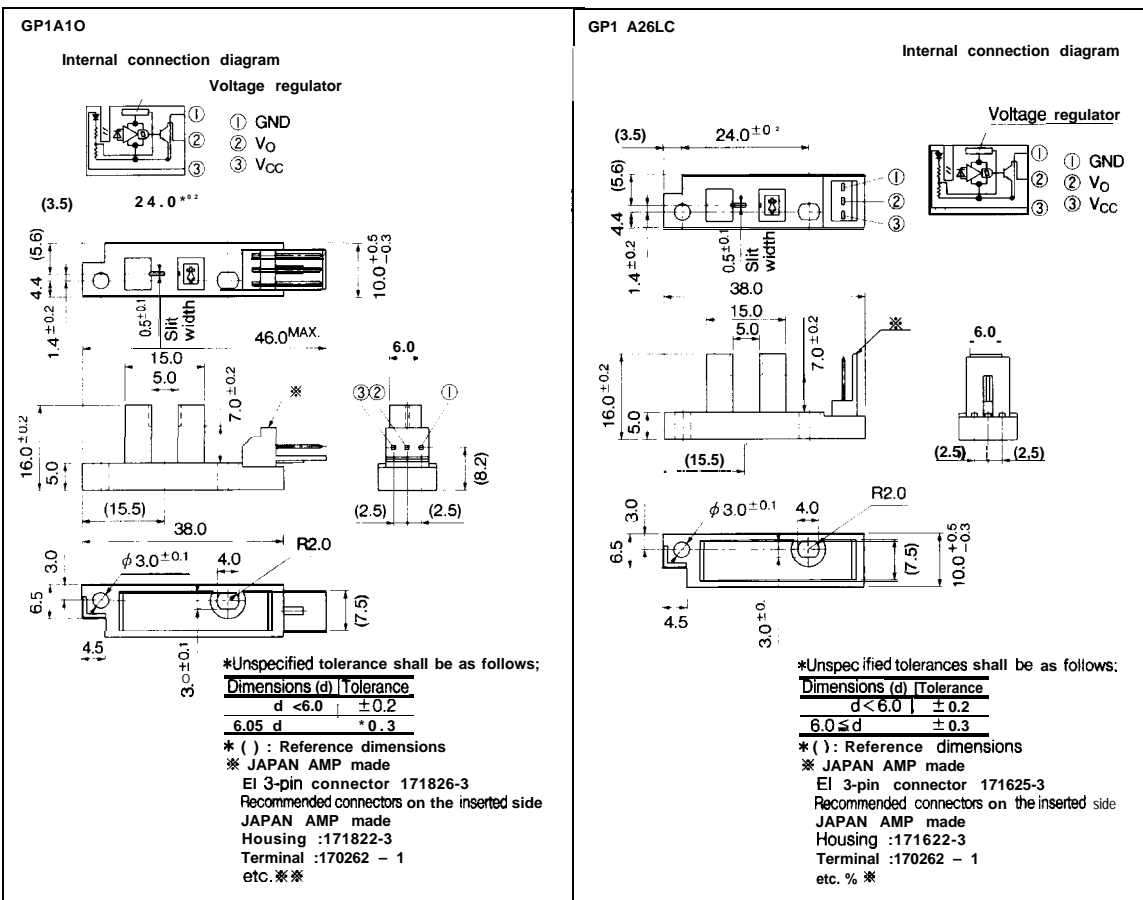
1. Uses 3-pin connector teminl
2. Supply voltage range ( $V_{CC}$  : 21 to 26V)
3. High sensig accuracy (Slit width: 0.5mm)
4. Wide gap between light emitter and detector (5mm)
5. Connector towards upside (GP1 A26LC)

### Applications

1. Copiers, Printers
2. Facsimiles

### Outline Dimensions

(Unit : mm)



Photointerrupters



\*"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 (See 674page)

**Absolute Maximum Ratings**

(Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	-0.5 to +3.0	v
*Output voltage	V()	-0.5 to +4.0	v
*2 Low level output current	I <sub>OL</sub>	50	mA
*3 Operating temperature	GP1A10	0 to +80	°C
	GP1A26LC	-20 to +80	
*3 Storage temperature	T <sub>stg</sub>	-20 to +95	°C
Operating humidity	R <sub>H</sub>	10 to 95	%

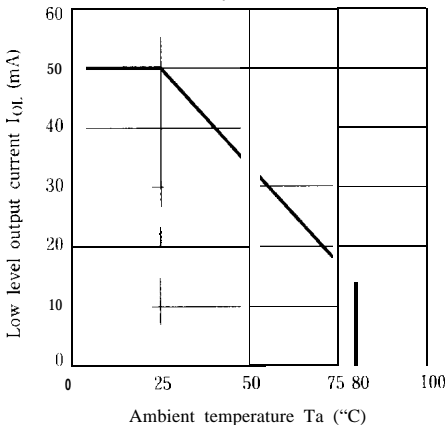
- \*1 Collector-emitter voltage of output transistor
- \*2 Collector current of output transistor
- \*3 The connector should be plugged in/out at normal temperature.

**Electro-optical Characteristics**

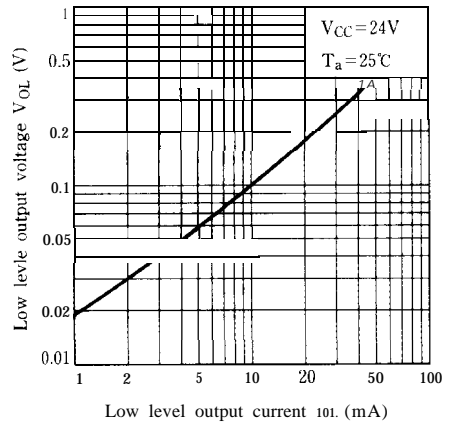
(Unless otherwise specified V<sub>CC</sub> = 24V, Ta = 25°C)

Parameter	Symbol	conditions	MIN.	TYP.	MAX.	Unit	
Operating supply voltage	V <sub>CC</sub>	—	21	—	26	v	
Low level supply current	I <sub>CCL</sub>	Light beam uninterrupted	—	—	30	mA	
Low level output voltage	V <sub>OL</sub>	Light beam uninterrupted, I <sub>OL</sub> = 16mA	—	—	0.6	v	
High level supply current	I <sub>CCH</sub>	Light beam interrupted	—	—	30	mA	
High level output voltage	V <sub>OH</sub>	Light beam interrupted, R <sub>L</sub> = 10kΩ, V <sub>CC</sub> = 26V	25.8	—	—	v	
Response characteristics	Minimum interruption time	t <sub>H</sub>	Ta = 0 to 80°C, R <sub>L</sub> = 4.7kΩ, V <sub>CC</sub> = 24V ± 5%	166	—	—	μs
	Minimum sensing time	t <sub>L</sub>		166	—	—	μs

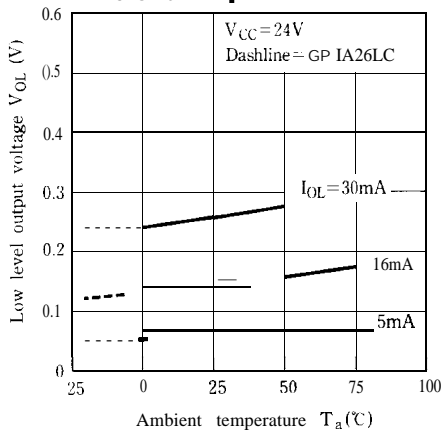
**Fig. 1 Low Level Output Current vs. Ambient Temperature**



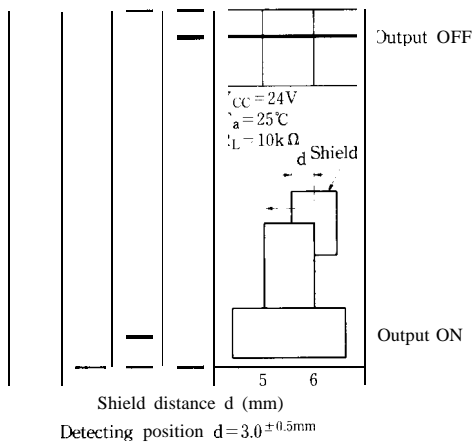
**Fig. 2 Low Level Output Voltage vs. Low Level output Current**



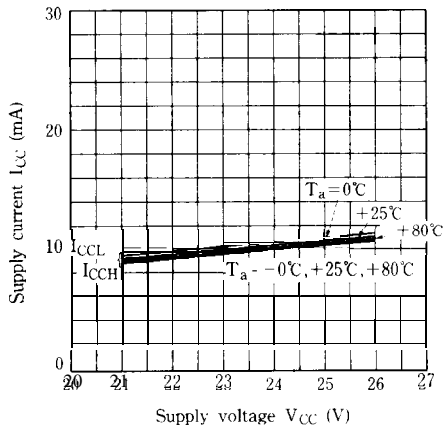
**Fig. 3 Low Level Output Voltage vs. Ambient Temperature**



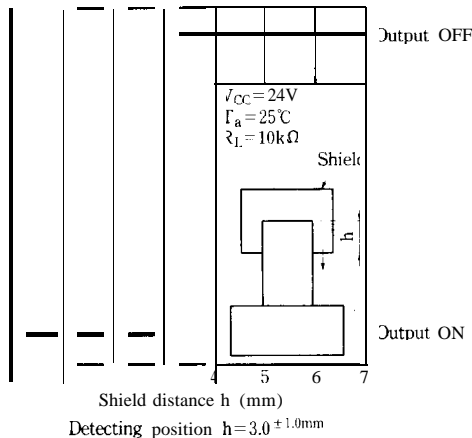
**Fig. 5 Detecting Position Characteristics (1)**



**Fig. 4 Supply Current vs. Supply Voltage**



**Fig. 6 Detecting Position Characteristics (2)**



## ■ 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	
	26 to 20	Bulk	Copper phosphide	170204-2	
			Brass	170262-1	
			Copper phosphide	170262-2	
	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	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		
			Bulk	170370-1	
30 to 26	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

- (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 rear 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, Freon TE, Freon TF, Diflon solvent S3-E

When the cleaning solvents except for specified materials are used, please consult us.

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