

GP1A10/GP1A26LC

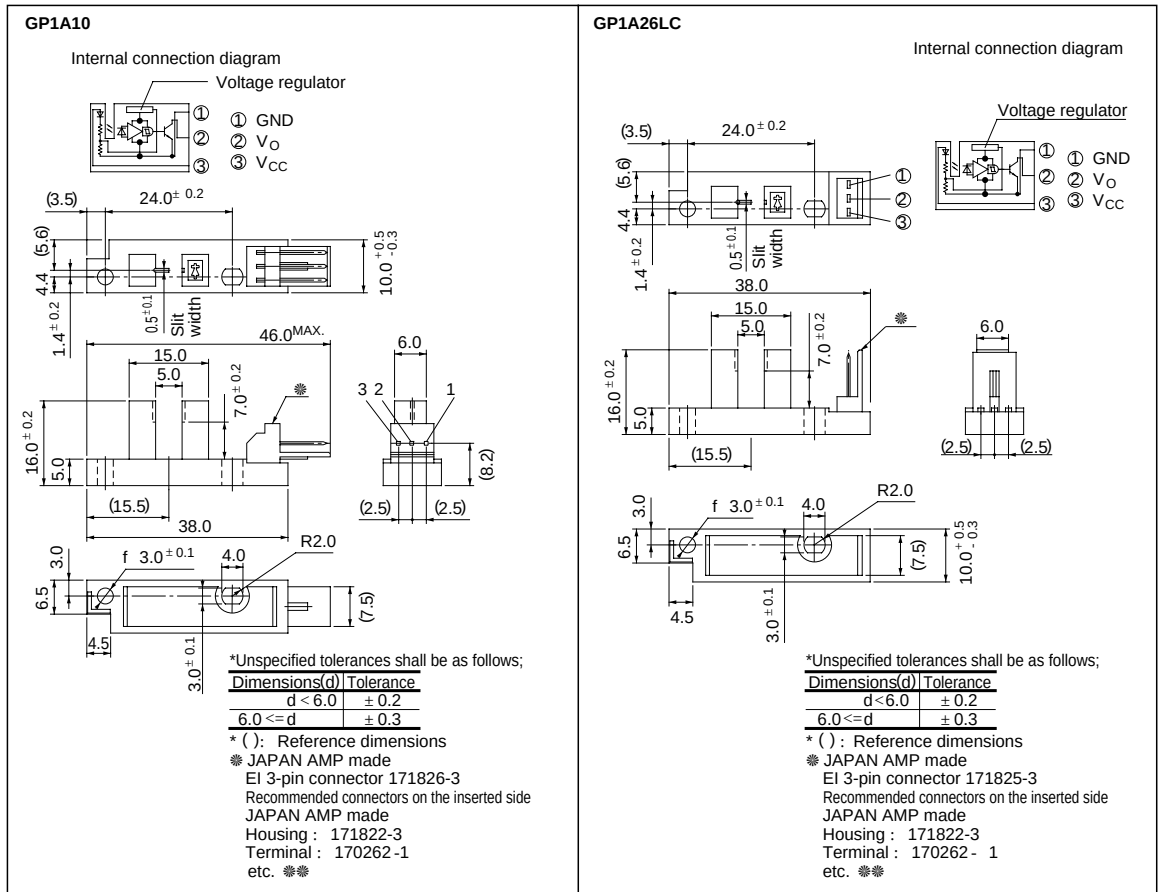
OPIC Photointerrupter with Connetor

■ 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 detec-
tor (5mm)
5. Connector towards upside (GP1A26LC)

■ 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(See674page).

Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	Rating	Unit
Supply voltage		V _{CC}	- 0.5 to + 30	V
*1 Output voltage		V _O	- 0.5 to + 40	V
*2 Low level output current		I _{OL}	50	mA
*3 Operating temperature	GP1A10	T _{opr}	0 to + 80	°C
	GP1A26LC		- 20 to + 80	
*3 Storage temperature		T _{stg}	- 20 to + 95	°C
Operating humidity		R _H	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_{CC} = 24V, Ta = 25°C)

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

Fig. 1 Low Level Output Current vs. Ambient Temperature

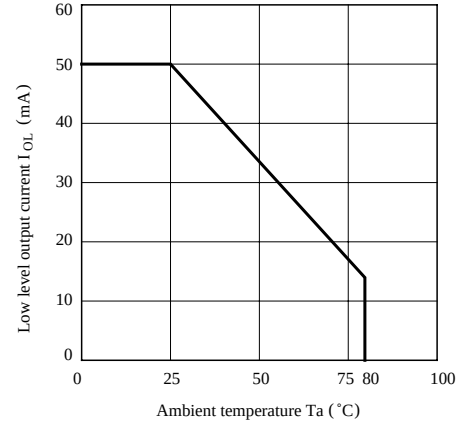


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

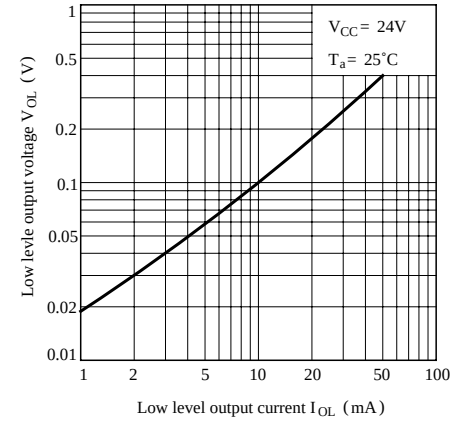


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

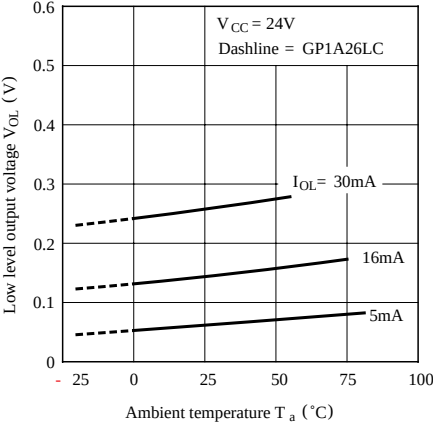


Fig. 4 Supply Current vs. Supply Voltage

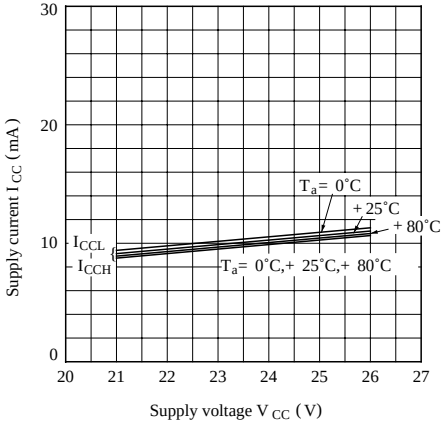


Fig. 5 Detecting Position Characteristics (1)

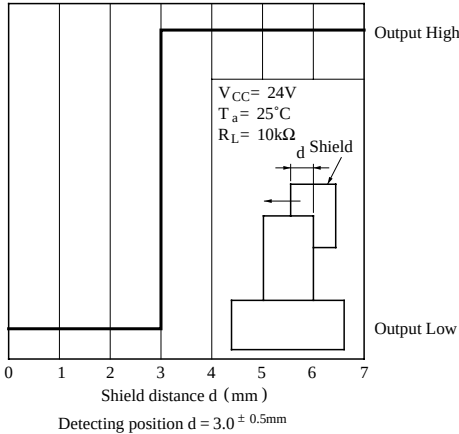
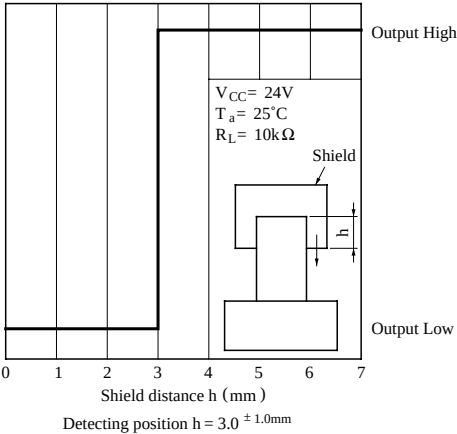


Fig. 6 Detecting Position Characteristics (2)



■ 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.	
	AWG 26 to 20	Bulk	Brass	170204-1	
			Copper phosphide	170204-2	
		Chain	Brass	170262-1	
			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	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.	
	AWG 26 to 22	Bulk		170369-1	
		Chain		170354-1	
	AWG 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

- (1) It is recommended that a by-pass capacitor of more than 0.01μ 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 ”.

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