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 detector（5mm）
5. Connector towards upside（GP1A26LC）

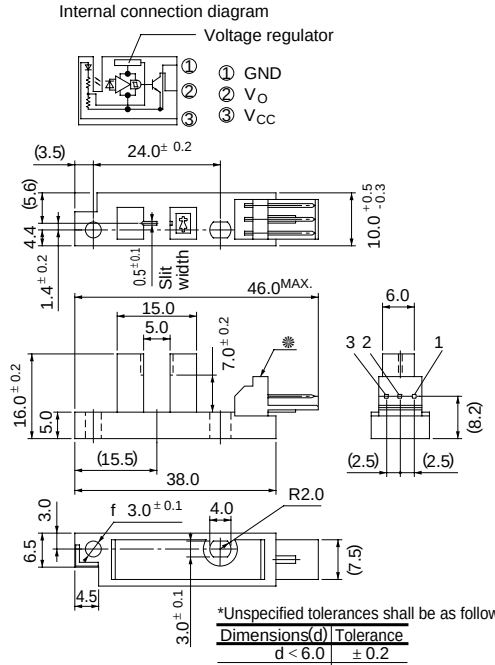
■ Applications

1. Copiers, Printers
2. Facsimiles

■ Outline Dimensions

（Unit：mm）

GP1A10

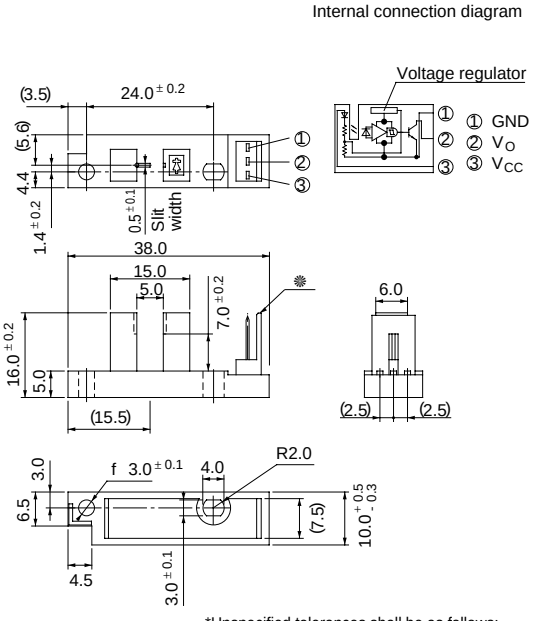


*Unspecified tolerances shall be as follows;

Dimensions(d)	Tolerance
d < 6.0	± 0.2
6.0 <= d	± 0.3

* ( ): Reference dimensions
✵ JAPAN AMP made
EI 3-pin connector 171826-3
Recommended connectors on the inserted side
JAPAN AMP made
Housing： 171822-3
Terminal： 170262-1
etc. ✵✵

GP1A26LC



*Unspecified tolerances shall be as follows;

Dimensions(d)	Tolerance
d<6.0	± 0.2
6.0<=d	± 0.3

* ( ): Reference dimensions
✵ JAPAN AMP made
EI 3-pin connector 171825-3
Recommended connectors on the inserted side
JAPAN AMP made
Housing： 171822-3
Terminal： 170262- 1
etc. ✵✵

* " 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
*1Output voltage		V_O	- 0.5 to + 40	V
*2 Low level output current		I_{OL}	50	mA
*3Operating temperature	GP1A10	T_{opr}	0 to + 80	˚C
	GP1A26LC		- 20 to + 80	
*3Storage 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 tranistor
*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 character-istics	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

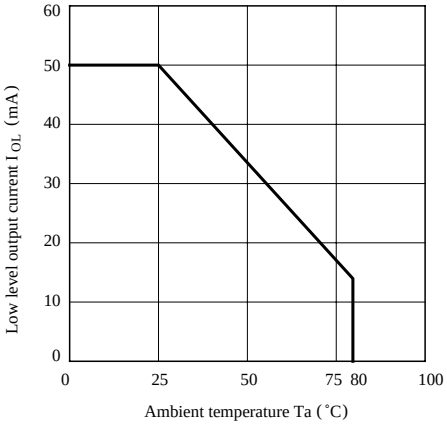


Fig. 2 Low Level Output Voltage vs. Low Level Output Current

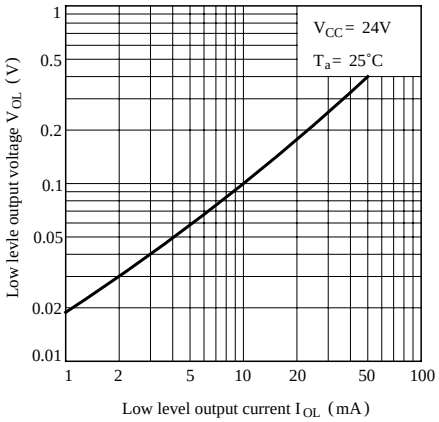


Fig. 3 Low Level Output Voltage vs. Ambient Temperature

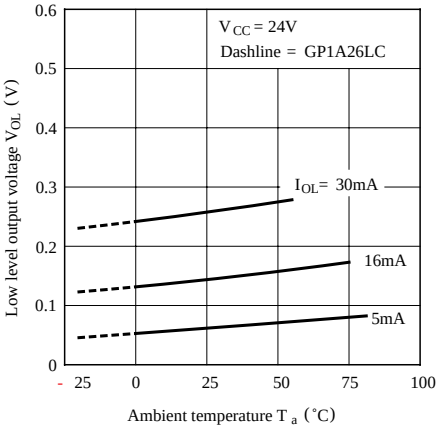


Fig. 4 Supply Current vs. Supply Voltage

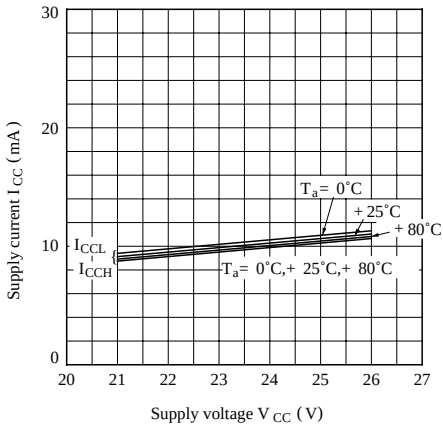


Fig. 5 Detecting Position Characteristics (1)

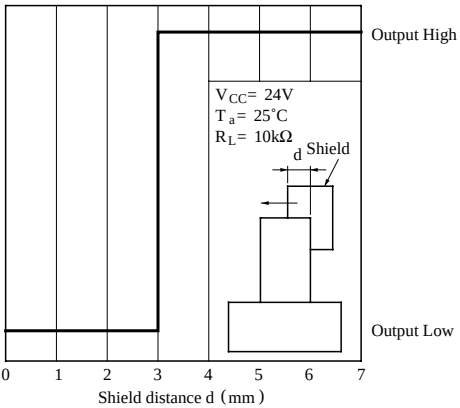
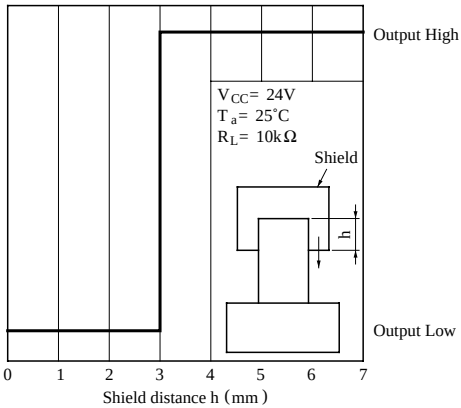


Fig. 6 Detecting Position Characteristics (2)



■ 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 0.01μF 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 cautlons, refer to the chapter " Precautions for Use ".