GP1A71A/GP1A71A1

Compact Size OPIC Photointerrupter with Connector

■ Features

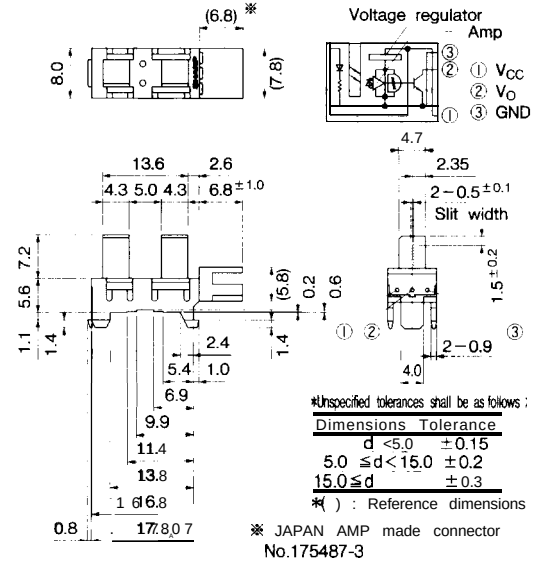
1. Compact type
2. Snap-in mounting type
3. Can be mounted on 3 different thickness boards (1.0mm, 1.2mm, 1.6mm)
4. 3-pin connector terminal

■ Applications

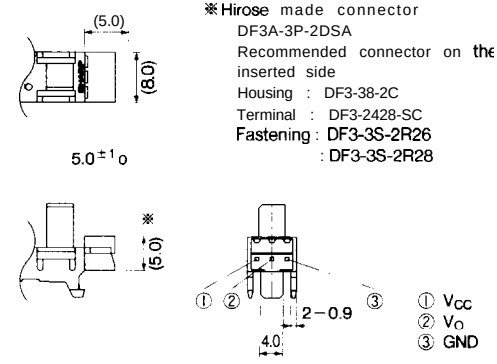
1. Copiers
2. Laser beam printers
3. Facsimiles

■ Outline Dimensions (Unit : mm)

GP1A71A



GP 1 A71 Al (same as GP1A71 A except connector)



*"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.

■ AbsoMe Maximum Ralings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.5 to +10	v
*1 Output voltage	V_{out}	−0.5to +28	v
*2Low level output current	$I_{(,L}$	50	mA
"Operating temperature	T_{opr}	−20 to+75	℃
*3Storage temperature	T_{stg}	−30 to +85	℃

*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 (Unless otherwise specified V_{CC}=5V, Ta=25℃)

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}=16mA	–		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_I=47kΩ	V_{CC} x 0.9	–	–	v
Response characteristics	Minimum interruption time	t_H	R_L=4.7kΩ	166	–	–	μs
	Minimum sensing time	t_L		166		–	μs

Fig. 1 Low Level Output Current vs. Ambient Temperature

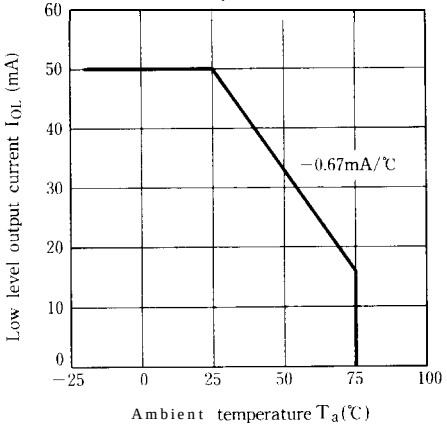
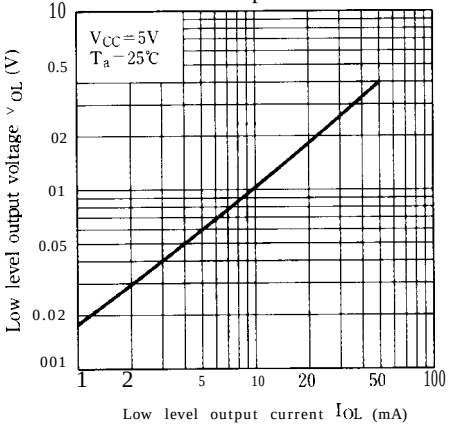


Fig. 2 Low Level Output Voltage vs. Low Level output current



3 Low Level Output Voltage vs. Ambient Temperature

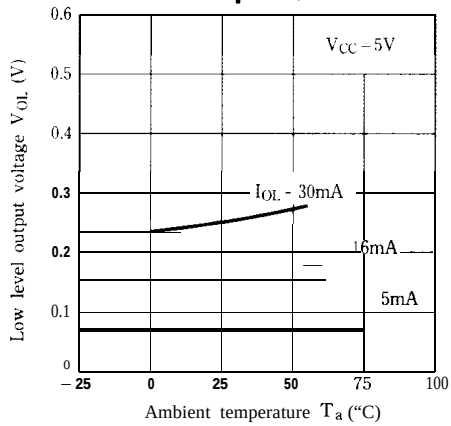


Fig. 4 Supply Current vs. Supply Voltage

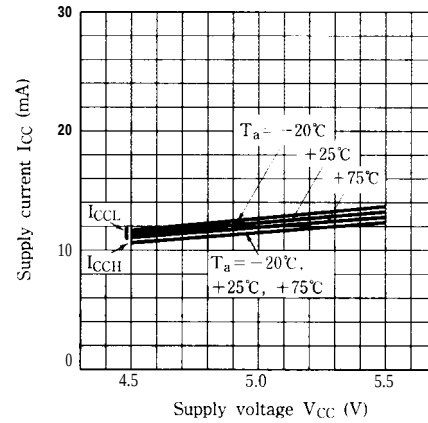


Fig. 5 Detecting Position Characteristics (1)

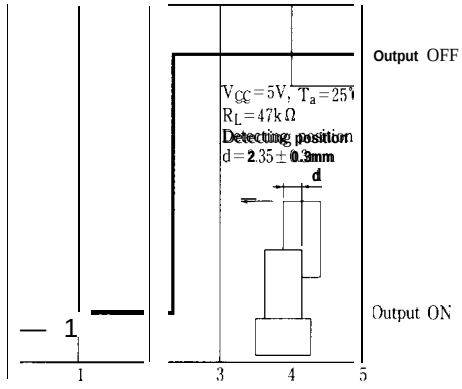
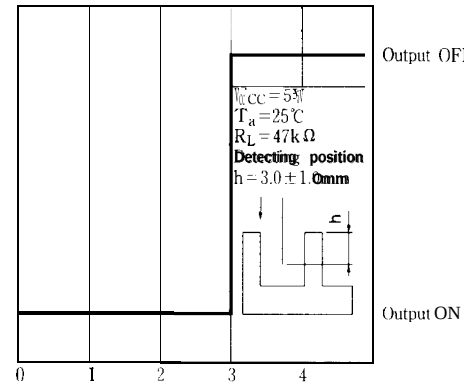
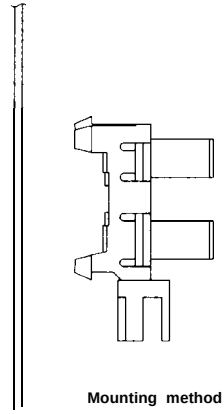


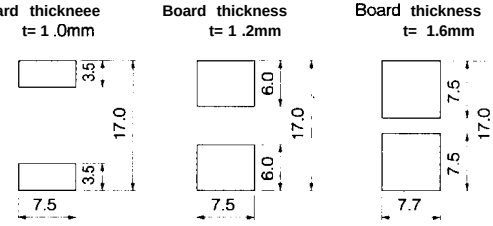
Fig. 6 Detecting Position Characteristics (2)



■ Recommended Mounting Holes (Unit : mm)



Mounting method



Recommended mounting holes

■ Precautions for Use

(1) In this product, the PWB is fixed with a hook, and cleaning solvent may remain inside the case; therefore, dip cleaning or ultrasonic cleaning are prohibited.

(2) 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 solvevt in the marking portion.

In this case, use only the following type of cleaning solvent for wiping off :

Ethyl alcohol, Methyl alcohol, Isopropyl alcohol,

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

(3) In order to stabilize power supply line, connect a by-pass capacitor of more than 0.01 μF between Vcc and GND near the device.

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