

GP1A44E1

Transmissive Type Photointerrupter with Actuator

■ Features

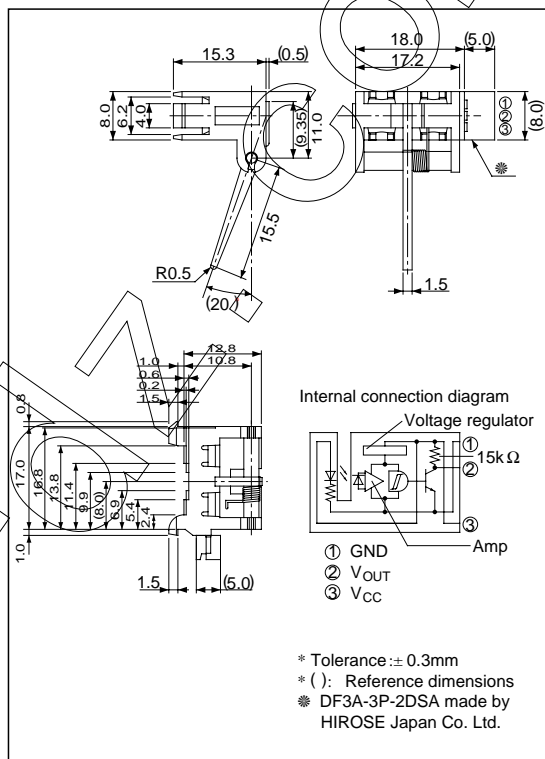
1. With compact actuator
2. Easy wiring due to built-in connector
3. Snap-in mounting type in order to mount to an equipment easily
4. OPIC output type for direct connection to microcomputer

■ Applications

1. Copiers
2. Laser beam printers
3. Facsimiles

■ 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.

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{CC}	- 0.5 to + 10	V
*1 Output current	I _{OL}	50	mA
*2 Operating temperature	T _{opr}	- 20 to + 75	°C
*2 Storage temperature	T _{stg}	- 40 to + 85	°C

*1 Collector current of output transistor

*2 The connector should be plugged in/out at normal temperature.

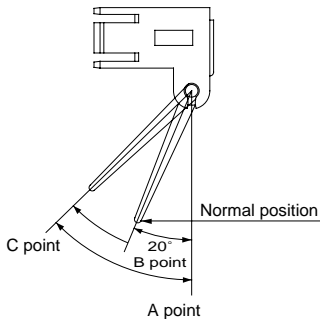
■ Electro-optical Characteristics

(Unless otherwise specified, V_{CC}= 5V, Ta= 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Low level dissipation current	I _{CCL}	Light beam interrupted	-	-	20	mA
Low level output voltage	V _{OL}	Light beam interrupted I _{OL} = 16mA	-	-	0.4	V
High level dissipation current	I _{CCH}	Light beam uninterrupted	-	-	20	mA
High level output voltage	V _{OH}	Light beam uninterrupted	V _{CC} x 0.9	-	-	V
Operating supply voltage	V _{CC}	Ta =- 20 to + 75°C	4.5	-	5.5	V

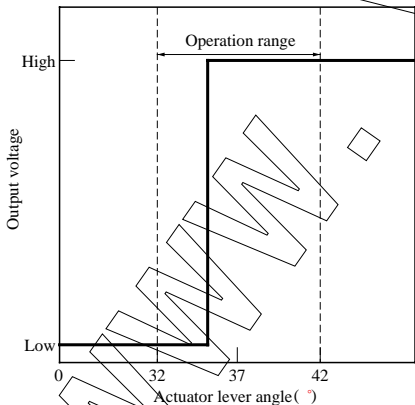
* Condition of light beam interrupted : Lever is normal condition on the Fig.1.
Condition of light beam uninterrupted : Lever is 30° or more movement condition from A point to B point on Fig.1.

Fig. 1 Detecting Position



Output voltage between A point and C point shall be from low level to high level when the actuator level rotated ($37^{\circ} \pm 5^{\circ}$) from normal condition B point to C point in Fig.1. Normal condition B point shall be opaque condition.

Fig. 2 Output Voltage vs. Actuator Lever Angle



- Mechanical Characteristics
- Lever starting torque: $1 \times 10^{-4} \text{ N} \cdot \text{m}$ or loss
- Lever Life
- 100 000 times or more
- (Lever reciprocating operation between normal condition B point and C point at the condition of no load.)

Fig. 3 Low Level Output Current vs. Ambient Temperature

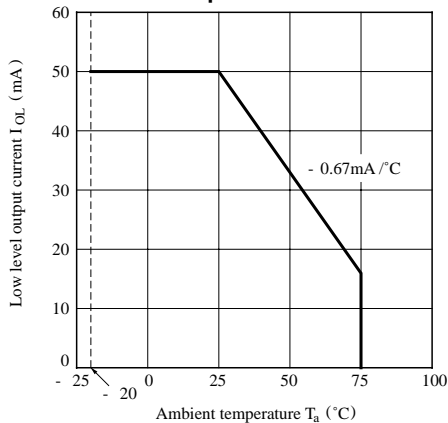


Fig. 5 Low Level Output Voltage vs. Ambient Temperature

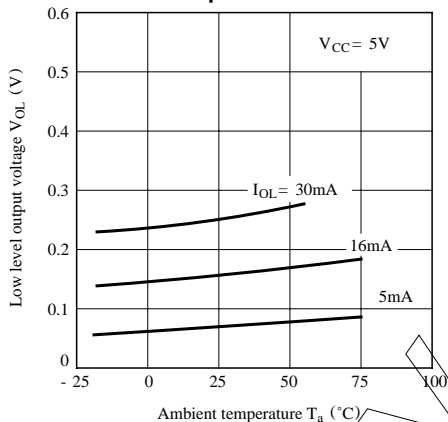


Fig. 4 Low Level Output Voltage vs. Low Level Output Current

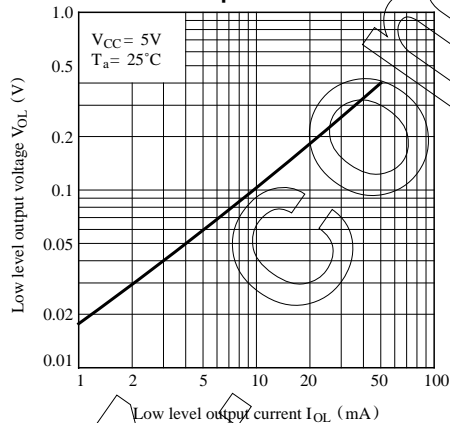
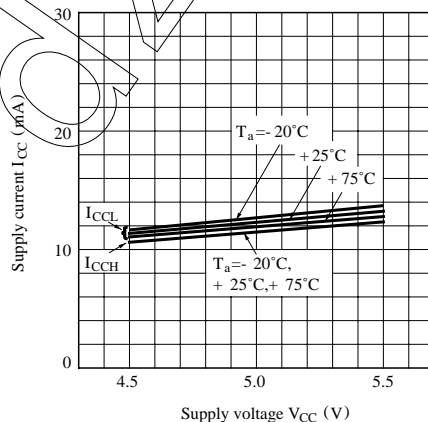


Fig. 6 Supply Current vs. Supply Voltage



- Please refer to the chapter “Precautions for Use” (Page 78 to 93).

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