

GP1A44E1

Transmissive Type Photointerrupter with Actuator

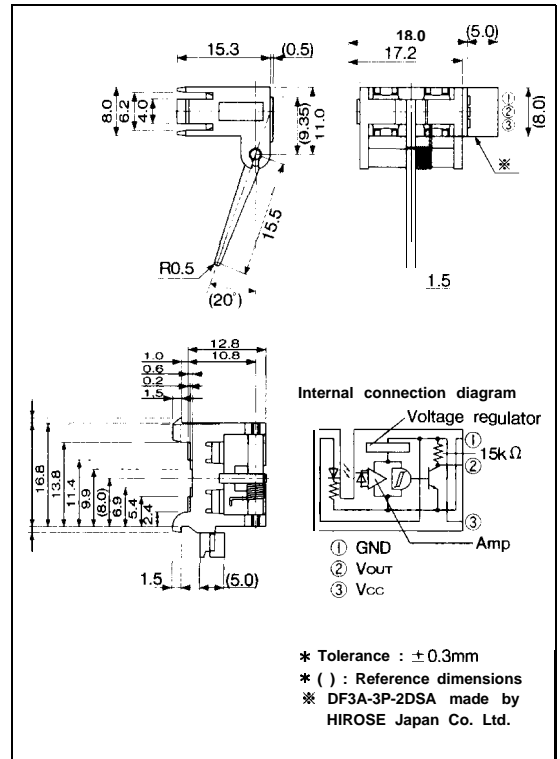
Features

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

($T_a = 25^\circ\text{C}$)

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	$^\circ\text{C}$
* ³ Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

*¹ Collector current of output transistor

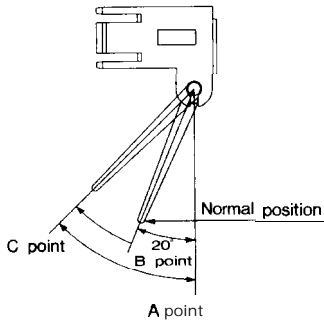
*² The connector should be plugged in/out at normal temperature

■ **Electro-optical** Characteristics (Unless otherwise specified, $V_{CC}=5V, T_a=25^{\circ}C$)

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	$V_{CC} \times 0.9$	—	—	v
Operating supply voltage	V_{CC}	$T_a = -20$ to $+75^{\circ}C$	4.5		5.5	v

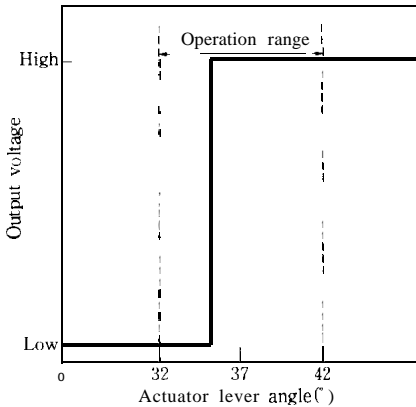
* Condition of light beam interrupted : Lever is normal condition on the Fig. 1.
 Condition of light beam uninterrupted : Lever is 30° or more movement condition from A point to B point on Fig.1.

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 ($3T \pm 5^{\circ}$) 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 : $lgf \cdot cm$ or less

■ **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

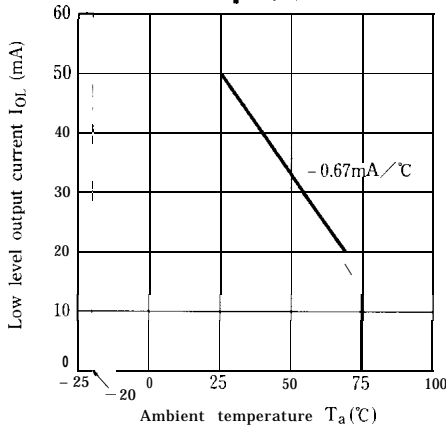


Fig. 4 Low Level Output Voltage vs. Low Level Output Current

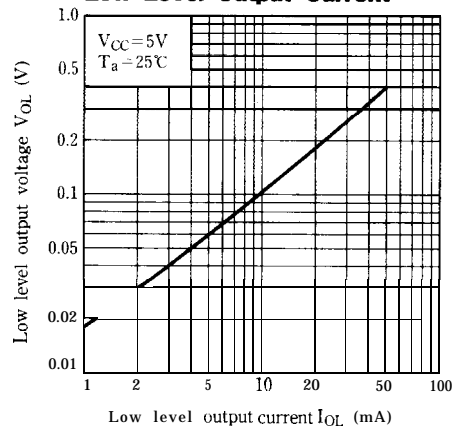


Fig. 5 Low Level Output Voltage vs. Ambient Temperature

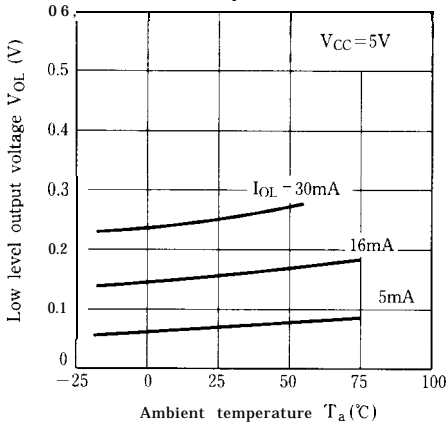


Fig. 6 Supply Current vs. Supply Voltage

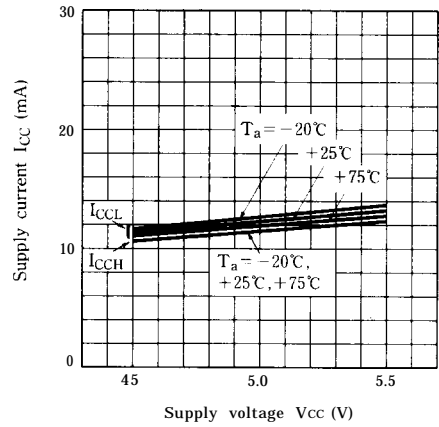
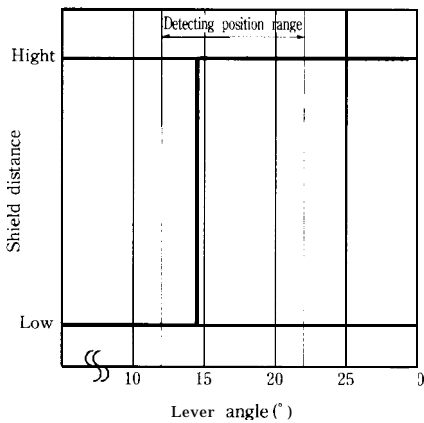


Fig. 7 Detecting Position Characteristics



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