

GP1A40

Connector Terminal Type OPIC Photointerrupter with Lever Type Actuator

Features

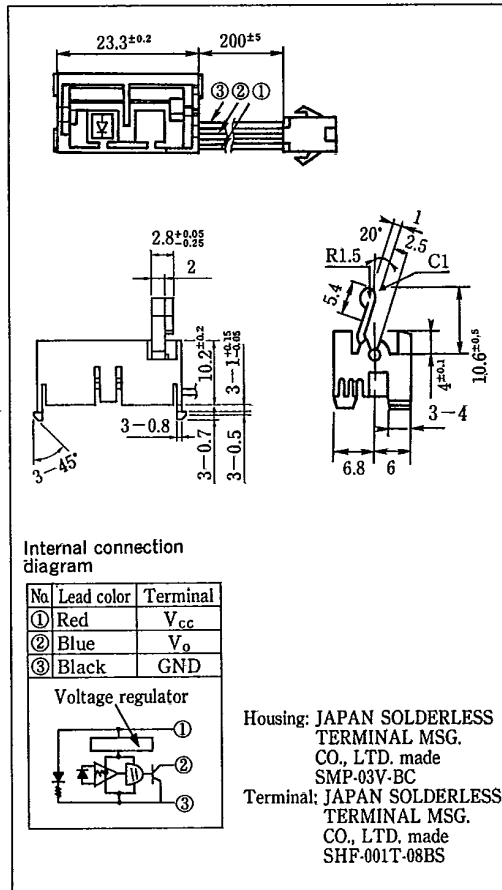
1. With lever type actuator
2. Connector terminal type

Applications

1. Copiers
2. Facsimiles

Outline Dimensions

(Unit : mm)



*OPIC is a registered trademark of Sharp and stands for Optical IC. It has a light detecting element and signal processing circuitry integrated onto a single chip.

Absolute Maximum Ratings

(T_a = 25°C)

Parameter	Symbol	Rating	Unit	Remark
Supply voltage	V _{CC}	7	V	—
Output voltage	V _{out}	28	V	Collector-emitter voltage of output transistor
Output current	I _O	50	mA	Collector current of output transistor *1
Operating temperature	T _{opr}	-25 ~ +75	°C	The connector should be plugged in/out at normal temperature.
Storage temperature	T _{stg}	-30 ~ +85	°C	The connector should be plugged in/out at normal temperature.

*1 Fig. 1 shows output current derating curve.

Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating supply voltage	V _{CC}	—	4.5	—	5.5	V
Low level output voltage	V _{OL}	Light beam uninterrupted, I _{OL} =16mA, V _{CC} =5V	—	—	0.4	V
Low level current dissipation	I _{CCL}	Light beam uninterrupted, V _{CC} =5V	—	—	30	mA
High level output voltage	V _{OH}	Light beam interrupted, R _L =47kΩ, V _{CC} =5V	V _{CC} ×0.9	—	—	V
High level current dissipation	I _{CCH}	Light beam interrupted, V _{CC} =5V	—	—	30	mA
Response Characteristics	Minimum shield time	t _H	R _L =280Ω, V _{CC} =5V	166	—	μs
	Minimum incident time	t _L	R _L =280Ω, V _{CC} =5V	166	—	μs

Mechanical Characteristics

Parameter	Symbol	Requirements
Mounting angle	θ ₁	75±3°
Opaque angle *1	θ ₂	85° MAX. 50° MIN. *2
Actuator lever operating load	L	0.5g or more in the arrow-indicated direction as shown in the figure below

- *1 Shielding light is defined as a condition with the actuator lever operating in the direction indicated by the arrow in the figure below in which the collector current (I_C) is reduced to 10% or less as compared to 100% for the condition in which the load on the actuator lever is 0g with the device mounted at the angle of 75±3°.
- *2 If θ₂ comes into 48° or less, actuator lever causes to break or to transform due to holder touching.

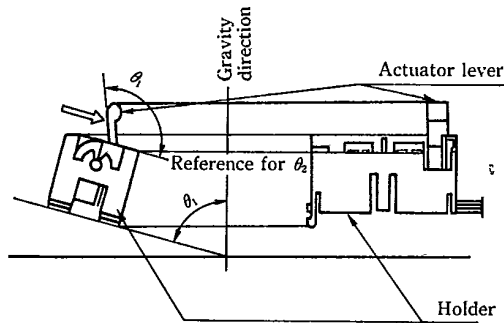


Fig. 1 Output Current vs. Ambient Temperature

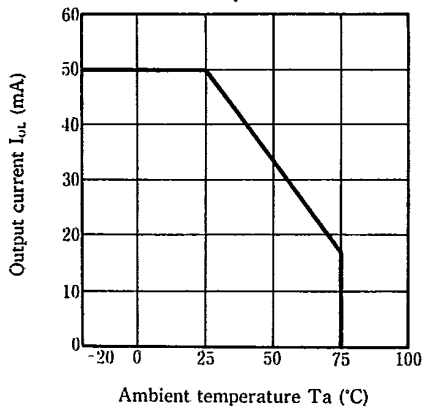


Fig. 2 Low Level Output Current vs. Ambient Temperature

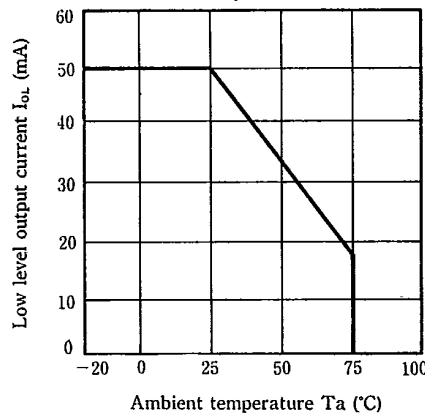


Fig. 3 Low Level Output Voltage vs. Low Level Output Current

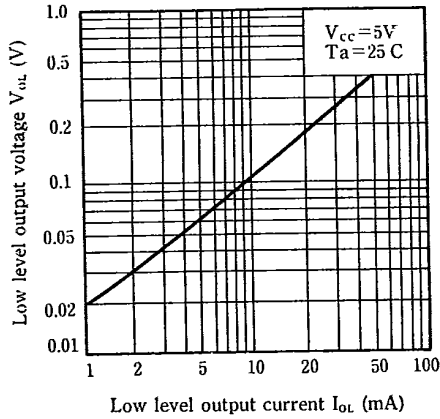


Fig. 4 Low Level Output Voltage vs. Ambient Temperature

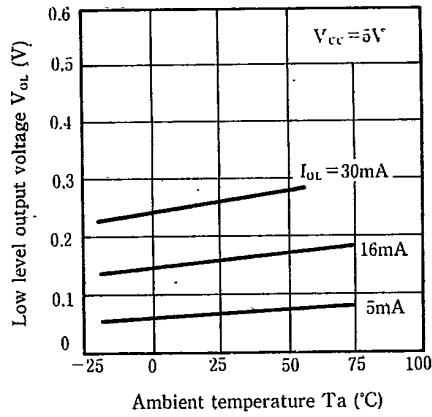


Fig. 5 Supply Current vs. Supply Voltage

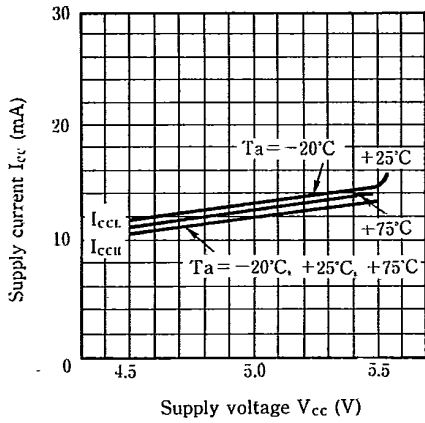


Fig. 6 Detecting Position Characteristics

