

GP1A40Connector Terminal Type OPIC Photointerrupter
with Lever Type Actuator**■ Features**

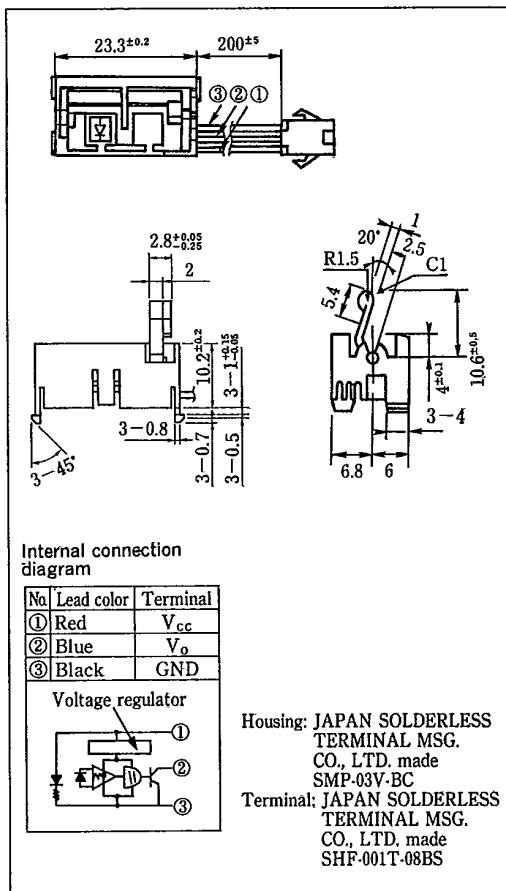
1. With lever type actuator
2. Connector terminal type

■ 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

(Ta=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.

SHARP

Electro-optical Characteristics

(Ta=25°C)

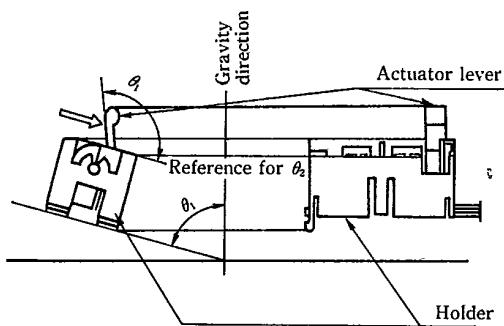
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating supply voltage	V _{cc}	—	4.5	—	5.5	V
Low level output voltage	V _{OL}	Light beam uninterrupted, I _{OL} =16mA, V _{cc} =5V	—	—	0.4	V
Low level current dissipation	I _{CCL}	Light beam uninterrupted, V _{cc} =5V	—	—	30	mA
High level output voltage	V _{OH}	Light beam interrupted, R _L =47kΩ, V _{cc} =5V	V _{cc} ×0.9	—	—	V
High level current dissipation	I _{CHH}	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.



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Fig. 1 Output Current vs. Ambient Temperature

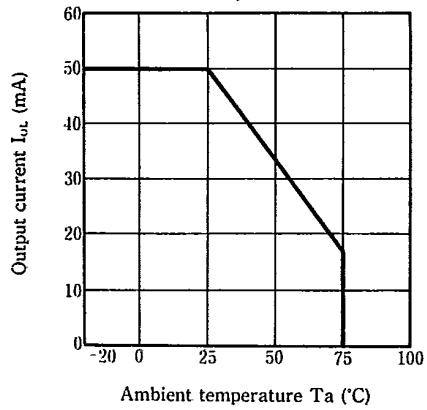
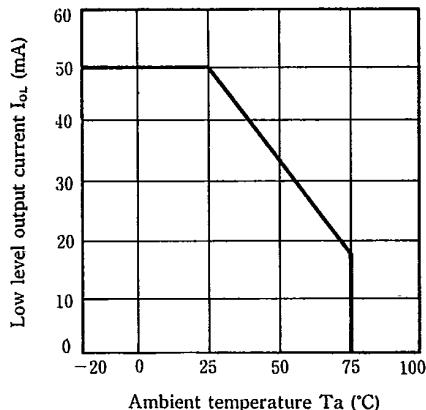
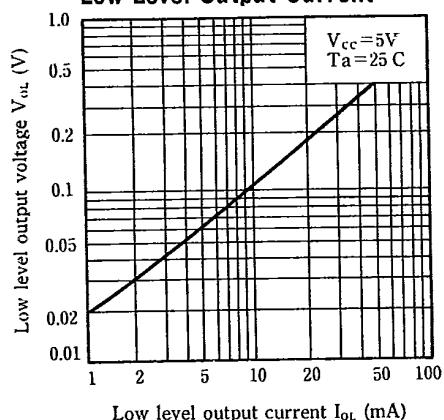
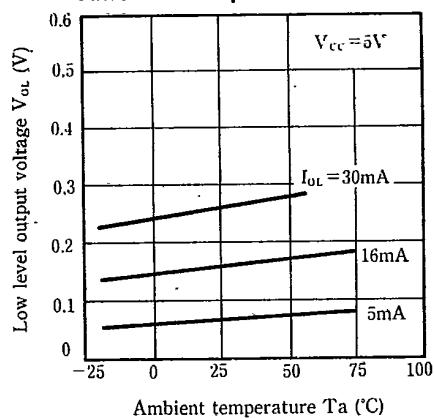
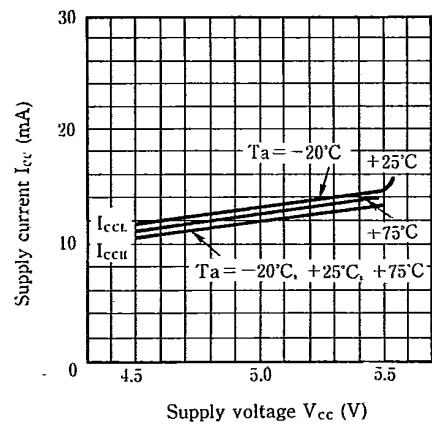


Fig. 2 Low Level Output Current vs. Ambient Temperature



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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**