

GP2A25

Light Modulation, Reflection Type Photointerrupter

■ Features

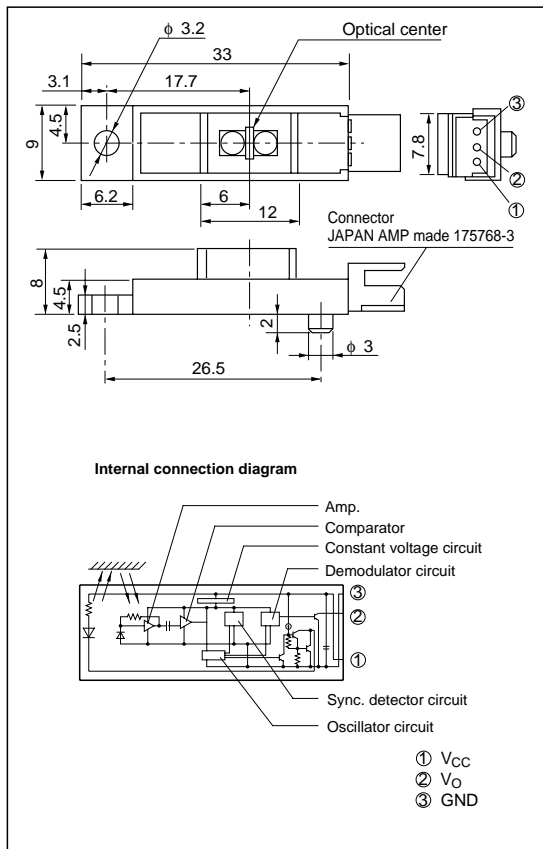
1. Light modulation system impervious to external disturbing light
2. Compact and 3-pin connector output type
(Volume : 30% less than **GP2A20**)
3. Long focal distance type (Optimum detecting distance : 3 to 7 mm)
4. Capable of TTL direct connection

■ Applications

1. Copiers
2. Facsimiles
3. LBPs

■ 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°C)

Parameter	Symbol	Rating	Unit	Remarks
Supply voltage	V _{CC}	- 0.5 to+ 7	V	-
Output voltage	V _O	30	V	-
Output current	I _{OL}	50	mA	Sink current *1
Operating temperature	T _{opr}	- 10 to+ 60	°C	The connector should be plugged in/out at normal temperature.
Storage temperature	T _{stg}	- 20 to+ 80	°C	

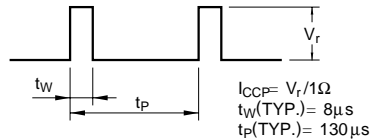
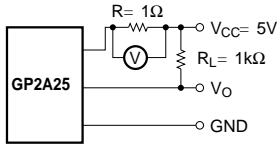
*1 Output current vs. ambient temperature : Per Fig. 1.

Electro-optical Characteristics

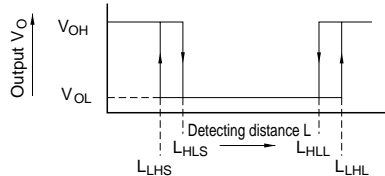
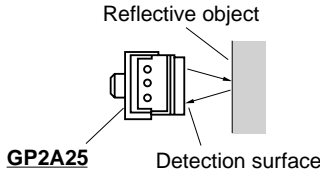
(V_{CC}=5V, T_a=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Supply voltage	V _{CC}	-	4.75	-	5.25	V
Dissipation current (I)	I _{CC}	V _{CC} = 5V, R _L =∞, smoothing value	-	-	30	mA
Dissipation current (II)	I _{CCP}	*1 V _{CC} = 5V, peak pulse value	-	-	150	mA
Low level output voltage	V _{OL}	V _{CC} =5V, I _{OL} =16mA, at detecting time	-	-	0.4	V
High level output voltage	V _{OH}	V _{CC} =5V, R _L =1kΩ, at non-detecting time	4.5	-	-	V
Non-detecting distance	L _{LHL}	*2 Kodak 90% reflective paper, V _{CC} =5V	-	-	27.0	mm
Detecting distance	L _{HLS}	*2 Kodak 90% reflective paper, V _{CC} =5V	-	-	1.0	mm
		*2 Black paper, V _{CC} =5V	-	-	3.0	mm
	L _{HLL}	*2 Kodak 90% reflective paper, V _{CC} =5V	9.0	-	-	mm
		*2 Black paper, V _{CC} =5V	7.0	-	-	mm
Response time	t _{PHL}	*3 V _{CC} = 5V	-	-	1.0	ms
	t _{PLH}		-	-	1.0	ms
External disturbing light illuminance	EV1	*4	3 000	-	-	lx
	EV2		1 500	-	-	lx

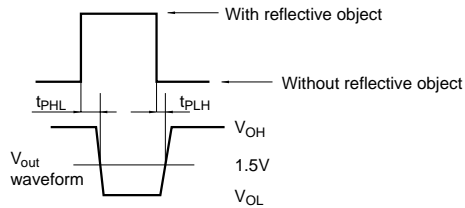
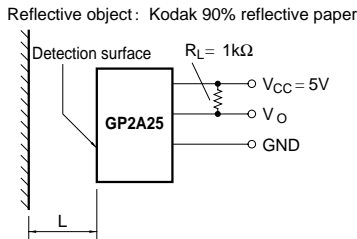
***1 Test Condition for Peak Pulse Value I_{CCP}**



***2 Test Condition for Detecting Distance Characteristics**



***3 Test Circuit for Response Time**



***4 Test Condition for External Disturbing Light Illuminance**

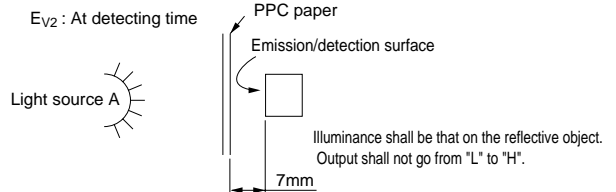
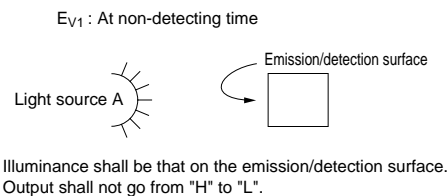


Fig. 1 Low Level Output Current vs. Ambient Temperature

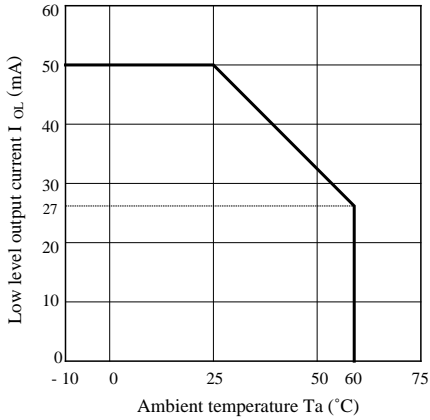


Fig. 2 Low Level Output voltage vs. Ambient Temperature

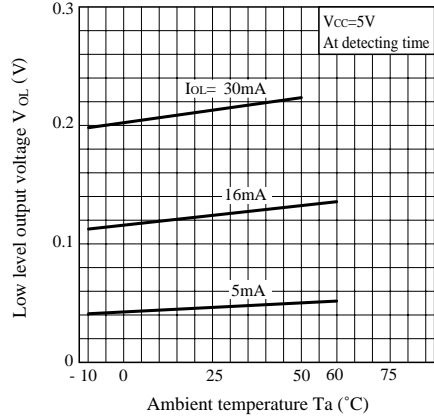


Fig. 3 Low Level Output Voltage vs. Low Level Output Current

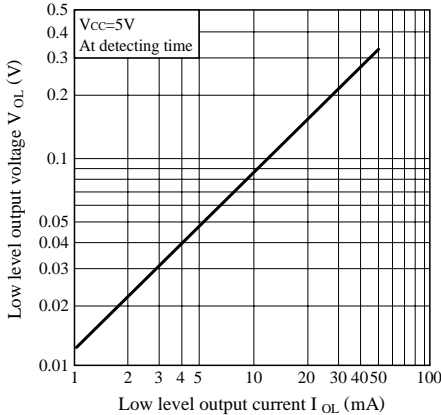
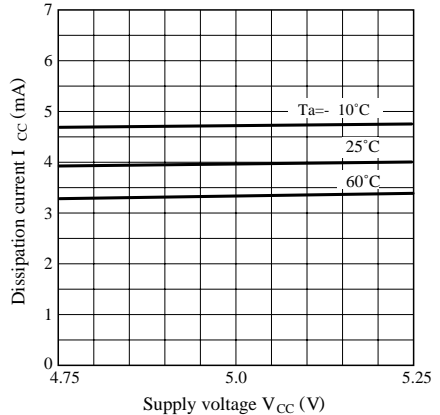


Fig. 4 Dissipation current (Smoothing Value) vs. Ambient Temperature



(Precautions for Use)

- 1) In order to stabilize power supply line, connect a by-pass capacitor of more than $0.33\mu F$ between V_{CC} and GND near the device.
- 2) Please do not perform dip cleaning or ultrasonic cleaning because lens part of this product is an optical device of acrylic resin.
- 3) Remove dust or stains, using an air blower or a soft cloth moistened in cleaning agent.

However, do not perform the above cleaning using a soft cloth with cleaning solvent in the marking portion.

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

Ethyl alcohol, Methyl alcohol, Isopropyl alcohol

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

- As for other general precautions, refer to the chapter "Precautions for Use".

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 - Industrial control
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 - Various safety devices, etc.
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