GP2A26

Light Modulation, Reflection OPIC Type Photointerrupter

■ Features

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

■ Applications

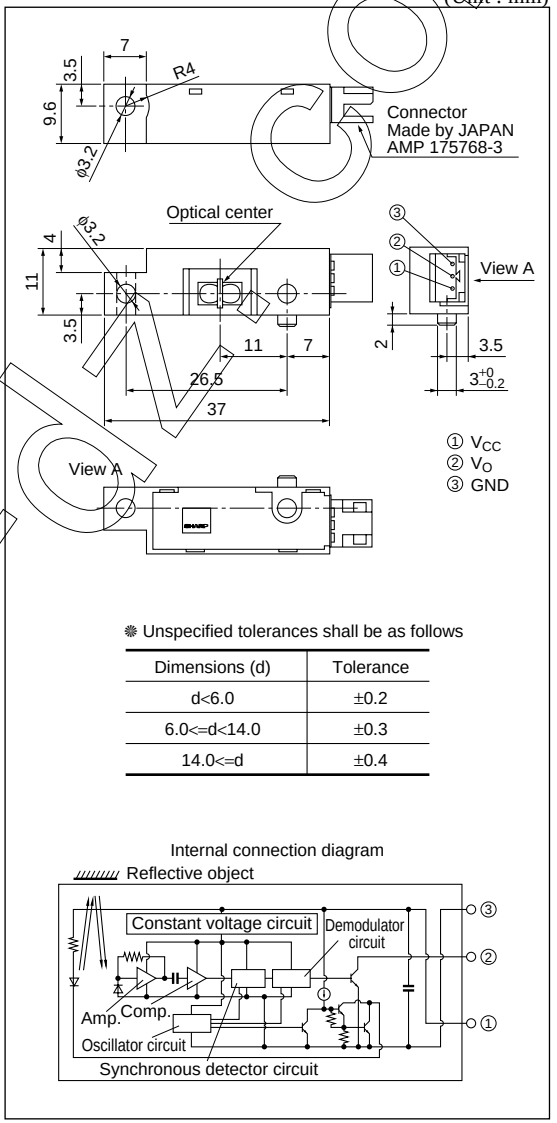
1. Copiers
2. Facsimiles
3. LBPs

■ Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.5 to +7	V
Output voltage	V_O	30	V
*1 Output current	I_{OL}	50	mA
*2 Operating temperature	T_{opr}	−10 to +60	˚C
Storage temperature	T_{stg}	−20 to +80	˚C

*1 Output current vs. ambient temperature : Refer to Fig.5.
Sink current
*2 The connector should be plugged in/out at normal temperature.

■ Outline Dimensions (Unit : mm)



※ Unspecified tolerances shall be as follows

Dimensions (d)	Tolerance
d<6.0	±0.2
6.0<=d<14.0	±0.3
14.0<=d	±0.4

Internal connection diagram

* "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.

■ Electro-optical Characteristics

(V_{CC}=5V, Ta=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}	*3 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}	*4Kodak 90% reflective paper, V_{CC}=5V	–	–	27.0	mm
Detecting distance	L_{HLS}	*4Kodak 90% reflective paper, V_{CC}=5V	–	–	1.0	mm
	L_{HLS}	*4 Black paper, V_{CC}=5V	–	–	3.0	mm
	L_{HLL}	*4Kodak 90% reflective paper, V_{CC}=5V	9.0	–	–	mm
	L_{HLL}	*4 Black paper, V_{CC}=5V	7.0	–	–	mm
Response time	t_{PHL}	*5 V_{CC}=5V	–	–	1.0	ms
	t_{PLH}	*5 V_{CC}=5V	–	–	1.0	ms
External disturbing light illuminance	E_{V1}	*6	3 000	–	–	lx
	E_{V2}	*6	1 500	–	–	lx

*3 Refer to Fig.1
*4 Refer to Fig.2
*5 Refer to Fig.3
*6 Refer to Fig.4

Fig.1 Test Condition for Peak Pulse Value I_{CCP}

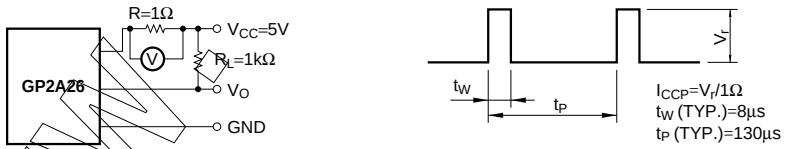


Fig.2 Test Condition for Detecting Distance Characteristics

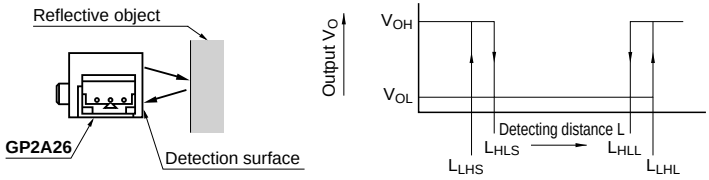


Fig.3 Test Circuit For Response Time

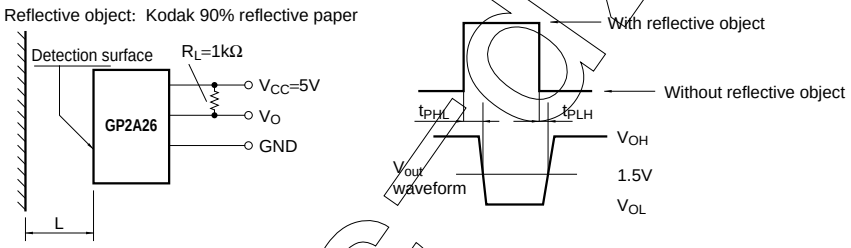


Fig.4 Test Condition for External Disturbing Light Illuminance

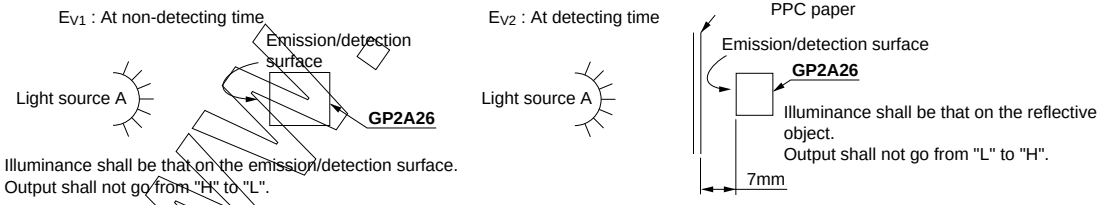


Fig.5 Low Level Output Current vs. Ambient Temperature

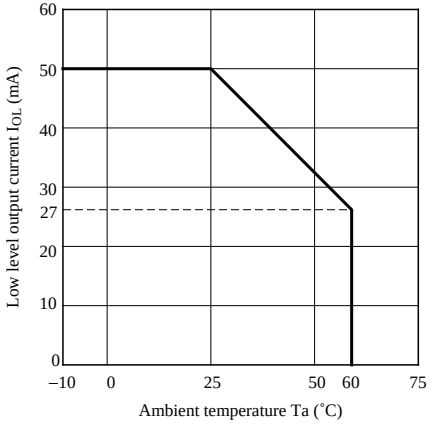


Fig.6 Low Level Output Voltage vs. Ambient Temperature

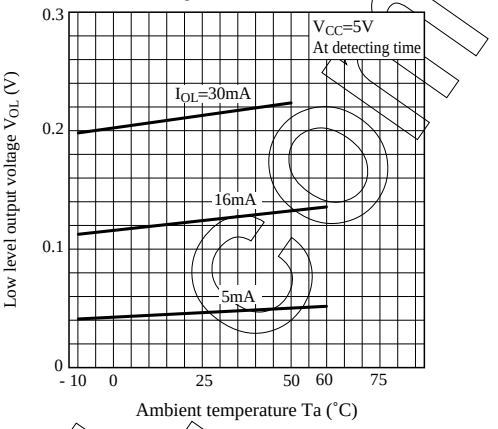


Fig.7 Low Level Output Voltage vs. Low Level Output Current

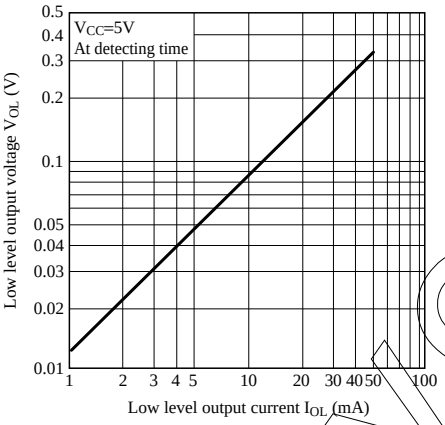
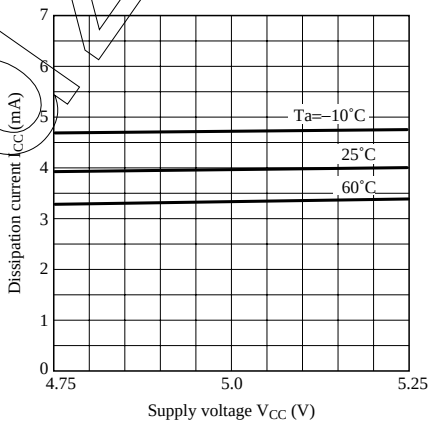


Fig.8 Dissipation Current (Smoothing Value) vs. Supply Voltage



■ Precautions for Use

1. In order to stabilize power supply line, connect a by-pass capacitor of more than 0.33µF between V_{CC} and GND near the device.
2. For cleaning

   Acryle resin is used as the material of the lens surface. As to cleaning, this refractive type photointerrupter shall not clean by cleaning materials absolutely. Dust and stain shall clean by air blow, or shall clean by soft cloth soaked in washing materials.
3. The connector should be plugged in / out at normal temperature.
4. As for other general precautions, refer to the chapter "Precautions for Use".

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- Office automation equipment
- Telecommunication equipment [terminal]
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- Industrial control
- Audio visual equipment
- Consumer electronics

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- Traffic signals
- Gas leakage sensor breakers
- Alarm equipment
- Various safety devices, etc.

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