SHARP GP2A200LCS

GP2A200LCS

■ Features

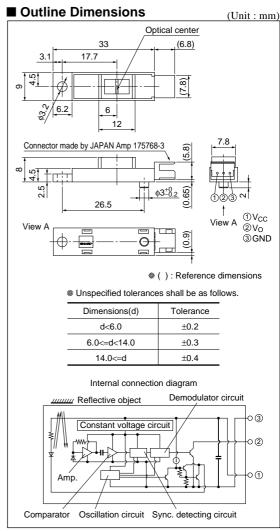
- Light modulation type which is free from external disturbing light
- 2. Long focal distance type (Detecting range : 5 to 15mm)
- 3. Compact type

■ Applications

- 1. Copiers
- 2. Facsimiles
- 3. Laser beam printers

■ Absolute Maximu	(Ta=25°C)		
Parameter	Symbol	Rating	Unit
Supply voltage	Vcc	-0.5 to +7	V
Output voltage	Vo	30	V

Light Modulation, Reflective Type Photointerrupter



^{* &}quot;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.

^{*1} Sink current refer to Fig.5

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

Electro-optical Characteristi		~			· `	Ca=25°C
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Supply voltage	Vcc	_	4.75	_	5.25	V
Dissipation current (I)	Icc	Vcc=5V, R _L =∞, smoothing value	_	_	30	mA
Dissipation current (II)	ICCP	*3 Vcc=5V, peak pulse value	_	_	150	mA
Low level output voltage	Vol	Vcc=5V, IoL=16mA, at detecting time	-	_	0.4	V
High level output voltage	Voh	$V_{\text{CC}}=5V$, $R_{\text{L}}=1k\Omega$, at non-detecting time	4.5	_	-	V
Non-detecting distance	Llhl	*4Kodak 90% reflective paper, Vcc=5V	_	_	90.0	mm
Detecting distance	LHLS	*4Kodak 90% reflective paper, Vcc=5V	_	_	2.0	mm
	Lhls	*4 Black paper, Vcc=5V	-	_	5.0	mm
	LHLL	*4Kodak 90% reflective paper, Vcc=5V	22.0	_	-	mm
	LHLL	*4 Black paper, Vcc=5V	15.0	_	-	mm
Response time	t PHL	*5 Vcc=5V	_	_	1.0	ms
	tplh	*5 Vcc=5V	-	_	1.0	ms
External disturbing light illuminance	Evı	*6	3 000	_	-	lx
	Ev2	*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}



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Fig.2 Test Condition for Detecting Distance Characteristics

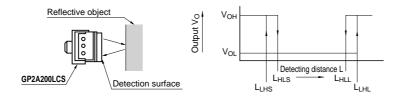


Fig.3 Test Circuit For Response Time

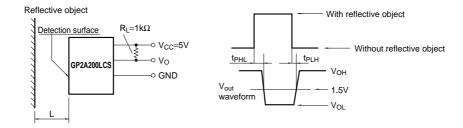
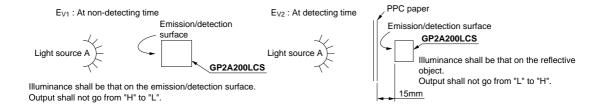


Fig.4 Test Condition for External Disturbing Light Illuminance



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Fig.5 Output Current vs. Ambient Temperature

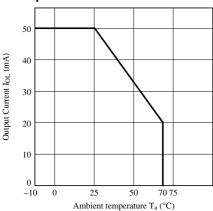


Fig.7 Low Level Output Voltage vs. Low Level Output Current

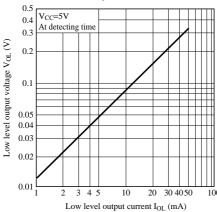


Fig.6 Low Level Output Voltage vs.
Ambient Temperature

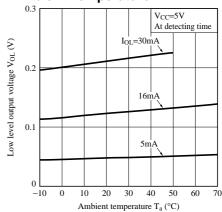
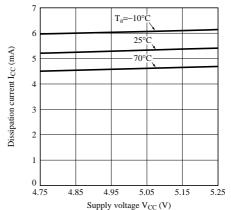


Fig.8 Dissipation Current (Smoothing Value) vs. Ambient Temperature



■ Precautions for Use

- 1. In order to stabilize power supply line, connect a by-pass capacitor of more than 0.33µF between Vcc 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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