Environmentally friendly photosensitive sensor

Product specifications

Customer	
Date	2021.11.18
Model	**LBCETC1-100**
Product number	

Make	
Approval	
Customer Signatures	

森霸传感科技股份有限公司

Sales center

5109 T3 32

Address: 32nd Floor,Tower T3,One Excellence,No.5109Menghai Avenue,Nanshan District, Shenzhen, China

Website www.nysenba.com

Tel 86-755-82594756 18929323299

Fax 86-755-82594762

Product function

1. (CdS) ROHS
Replace Photoresistors(Cds),RoHS Compliance/Pb-free/Cd-free.
2. LCD
adjust background light automatically,LCD,mobile phone,camera,Computer Camera etc.
3.
Suitable for all kinds of light control products and light control toys,such as night lamp etc.
4.
Suitable for all kinds of infrared light detection and testing equipment

Product Features

1. 850nm
Peak sensitive wavelength 850nm
2.
Low Power Consumption
3.
High reliability
4.
Perfect consistency, completely solve the problems of early start or poor consistency of the lamp.
5. +85 /65% 1000H
Fast response, stable performance, no drift at 1000h starting point under + 85 / 65% humidity condition
6.
Size customized, easy for Installation.

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Ta=25 MAXIMUM RATING (TA = 25 ° C)

Parameter name	Symbol	Rating	Unit
- Collector-Emitter Voltage	V_{CEO}	20	V
- Emitter-Collector Voltage	V_{ECO}	5	V
Consumption	Pc	70	mW
Working temperature	T_{opr}	-25 85	°C
Storage temperature	T_{stg}	-40 100	°C

Ta=25 ELECTOR-OPTICAL CHARACTERISTICS (TA = 25)

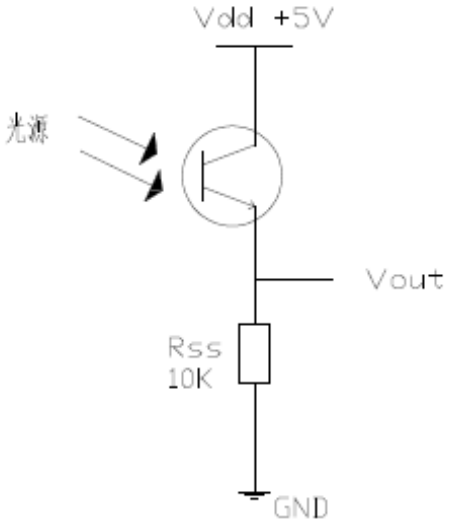
Parameter		Symbol	Testing conditions	Min.	Typical Value	Max.	Units
Photo-current		I_L(1)	V_{DD}=5V, E_V=10Lux	80	**100**	120	μA
		I_L(2)	V_{DD}=5V, E_V=50Lux		300		μA
		I_L(3)	V_{DD}=5V, E_V=100Lux		500		μA
Dark current		ICEO	VDD=5V,Ev=0Lux			0.2	μA
Photosensitive peak wavelength			\		850		nm
Sensitivity wave range			\	450		1050	nm
- Collector-emitter Breakdown Voltage		Bvceo	Ic=100uA Ee=0mW/cm2			70	V
- Emitter-Collector Breakdown Voltage		Bveco	IE=10uA Ee=0mW/cm2			30	V
Collector-Emitter saturation voltage		Vce (sat)	Ic=2mA Ee=1mW/cm2			0.4	V
Response time	Rise time	tr	VCE=5V, IC=1mA	25			μs
	Fall time	tr		30			

2850K LED.

Notes The test light source adopts 2850k color temperature led

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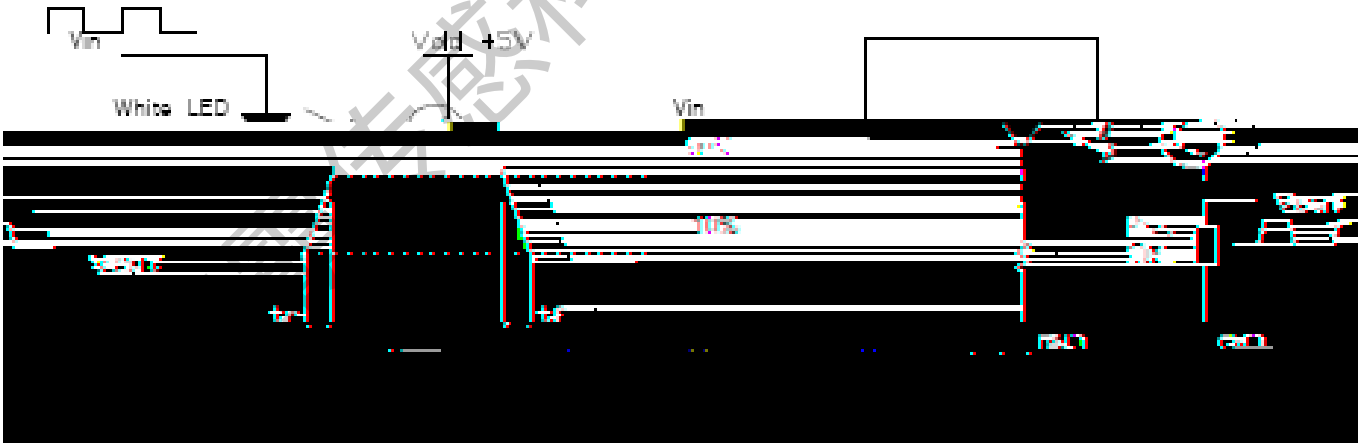
Test schematic



Photocurrent =V_{out}/ R_{SS}

* R_{SS} .

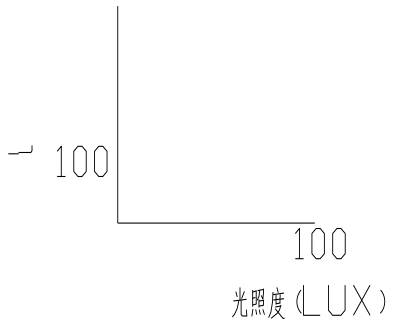
High stable resistance is recommended for RSS



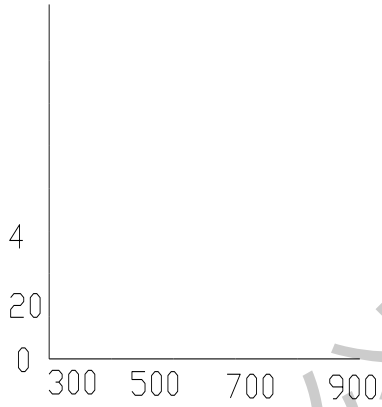
Measurement method of switching time

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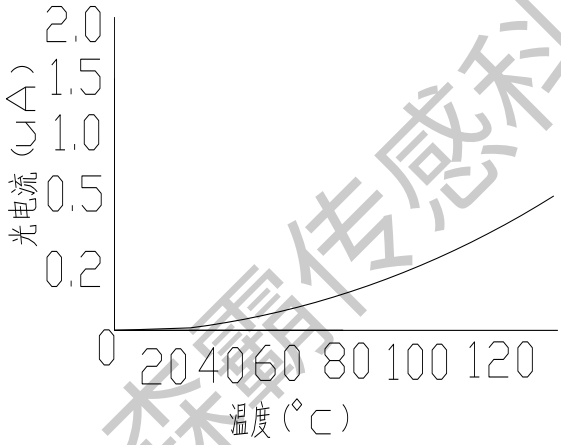
Typical photoelectric characteristics curves



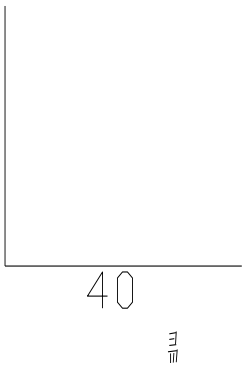
Change of illuminance and photocurrent



Photowavelength map



Temperature and photocurrent diagram



Temperature and dark current diagram

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Reliability Test

Test Parameter	Reference Criterion	Test Condition	Time	Quantity	/ Ac/RE
Resistance to Solder Heat	JESD22-B106	260 ±5	10sec	30PCS	0/1
Thermal Cycle	JESD22-A104	110 (15min) 5min 15 (15min)			

Recommended Soldering Conditions

Mode		Condition
Manually Soldering	Soldering Iron Temperature	340 50 Max340 (power:50Wmax)
	Soldering Time	3 3 seonds
	Soldering Position	1.5mm 1.5mm Min.(Form soldering joint to colloid)
Wave Soldering	Preheat	110 80 110 Max.80 sec.Max.
	Temperature	260 260
	Soldering Time	5 5 seonds
Solder pot Soldering	Preheat	100 60 100 Max.60 sec.Max
	Preheat Temperature	260 260
	Soldering Time	5 5 seonds
	Soldering Posiion	2mm 2mm(Form soldering joint to colloid

Notes

Careless operation in the welding process will cause product damage. During the welding process, any