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DATA SHEET

PART NO.: L-5Q3IRT-JNJ

REV: A / 0

CUSTOMER'S APPROVAL: _____

DCC: _____

DRAWING NO.: DS-81P-19-0028

DATE: 2019-06-28

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SURFACE MOUNT DEVICE LED

Part No.: L-5Q3IRT-JNJ

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■ Features

- Near human eye photo pic response.
- High IR rejection.
- Current output highly linear Vs light level.
- Temperature stable.
- Integrated high gain photo-current amplifier.
- Dark-current cancellation.

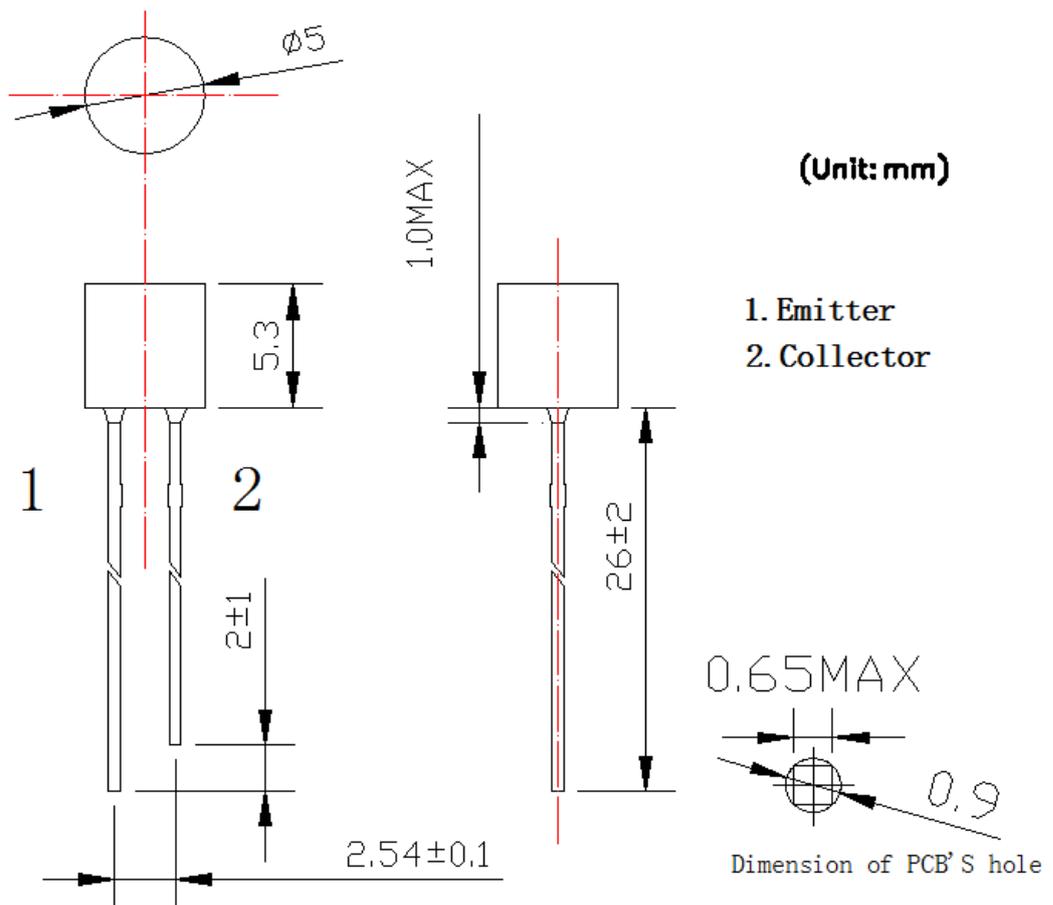
Instead of the traditional CDS photosensitive resistance, contain cadmium lead and hazardous substances ROHS compliant.

Dedicated to the anti-IR interference products, controls the switching of day and night, without adding casing filters.

■ Descriptions

The product is a low cost visible light sensor, with a current output which is directly proportional to the light level. It has a built in optical filter to provide a response which is close to the human eye.

■ Dimensions:





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Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.20\text{mm}$ unless otherwise noted.
3. Protruded resin under flange is 1.0mm max.
4. Pitch is a measure of goods and use of jack pitch.
5. Colloid at high temperatures become soft, LED pin to be formed or bent must be carried out under cooling, or easily cause damage to the internal LED Open.
6. Caution in ESD:

Static electricity and surge current will damage the transistors must be properly grounded with a wrist strap and a recommended anti-static gloves, equipment and machinery.

■ **Absolute Maximum Ratings (Ta = 25°C)**

Parameter	Symbol	Rating	Units
Operating Temperature	Topr	-25~+100	°C
Storage Temperature	Tstg	-25~+85	°C
Lead Soldering Temperature	Tsol	260	°C
Power Dissipation at(or below)25°C Free Air Temperature	PC	75	mW

■ **Electro-Optical characteristics(Ta=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Working Voltage	VCC		---	5	---	V
Rise time	Tr	VCE=5V	---	4.5	---	ms
Fall Time	Tf	Ev=10Lux RL=1000Ω	---	4.5	---	
Collector Dark Current	ICEO	Ev=0Lux VCE=5V	---	---	300	nA
On State Collector Current	IC1(on)	Ev=10Lux VCE=5v	4	5	6	μA
	IC2(on)	Ev=30Lux VCE=5v	12	15	18	μA
	IC3(on)	Ev=100Lux VCE=5v	40	50	60	μA
Wavelength of Peak Sensitivity	$\lambda \rho$	---	---	550	---	nm
Rang of Spectral Bandwidth	λ	---	400	---	700	nm



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Typical Electro-Optical Characteristics Curves

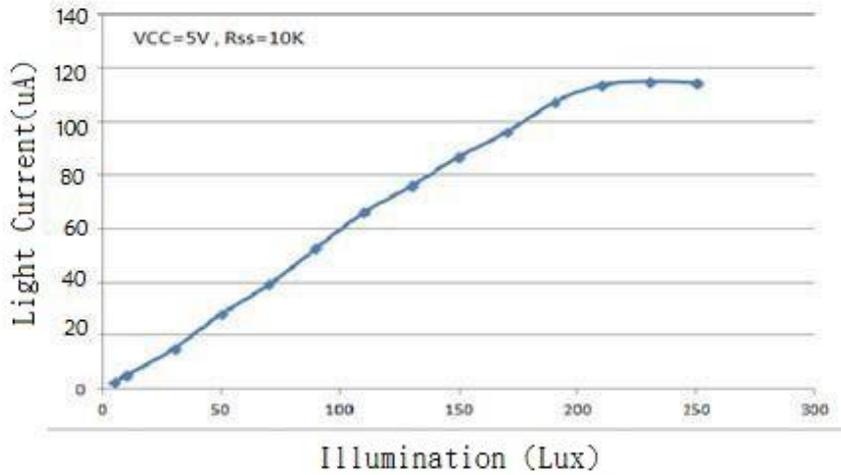


Fig1 Illumination light with the output current curve

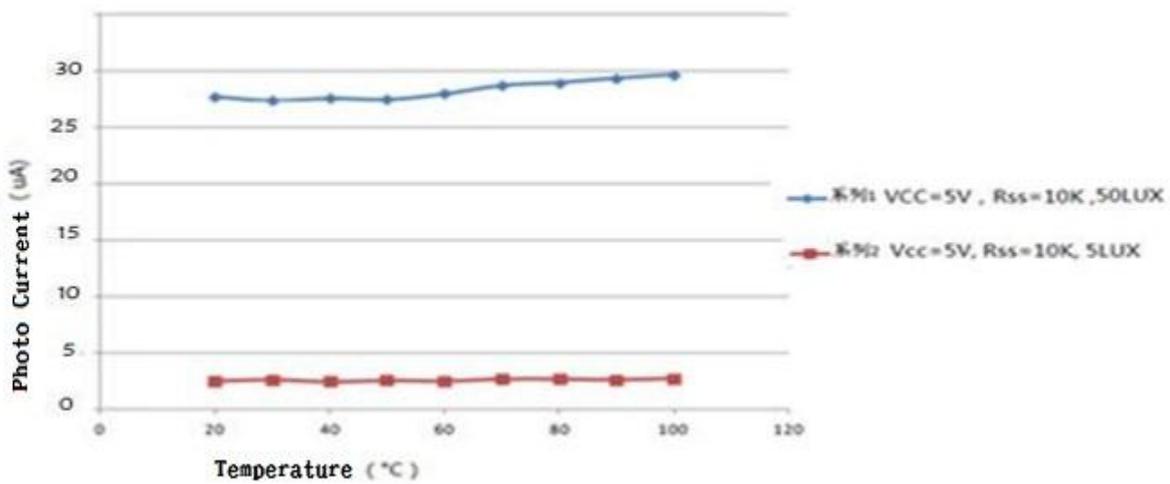


Fig2 Output light current changes curve with

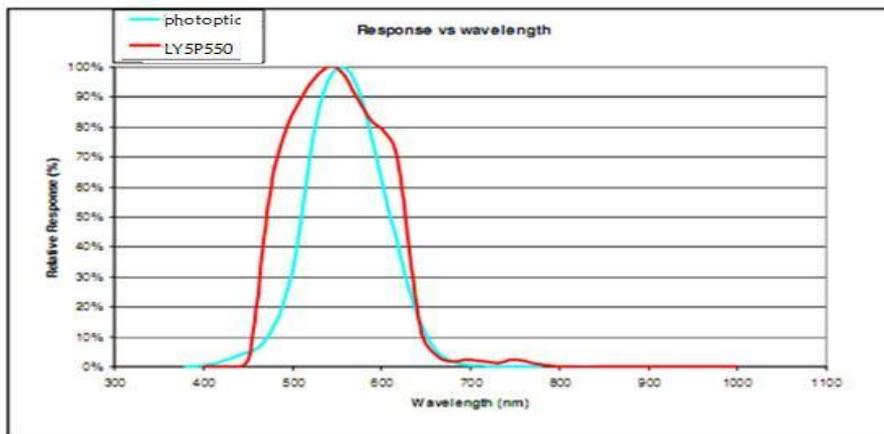


Fig3 Spectral response curve temperature



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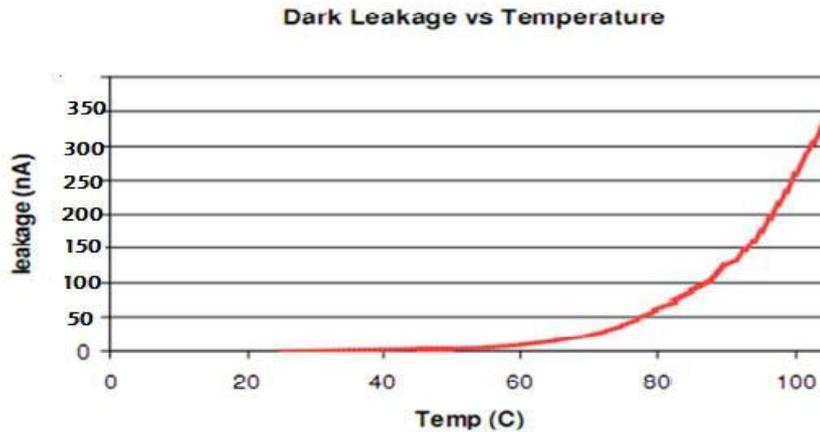


Fig4 Dark current temperature curve

Precautions:

Because of the temperature drift of the semiconductor, this product is suitable for use in the environment temperature 100 degrees celsius. Customers need to fully consider the application of this photosensitive products in different environments and different applications, I do not assume the company due to the customer in different applications and the risk of.

Pin molding

Pin molding needs to be done before soldering.

Not to the bracket near the roots epoxy molding body as a fulcrum.

Shaped pin position should more than 5mm from the gel, special circumstances need to 5mm or less (but should ≥ 2 mm) forming, should make a special fixture, fixed pin body parts near an epoxy molding minimize epoxy body the role of stress, prevent stress caused by too much product and epoxy body open crack on.

Storing

The product storage conditions of the factory should be $0 \sim + 30 \text{ }^\circ\text{C}$, relative humidity less than 70%, sealed and stored for a period of three months. If you store more than three months, they should be placed with a nitrogen and desiccant sealed container, storage time of up to one year.

Demolition bags use, should be used as far as possible in a short time. If you ever use, shall meet the storage conditions should be $0 \sim + 30 \text{ }^\circ\text{C}$, relative humidity of not less than 60%, and in two days after installing. Ferroalloy product scaffold is on the surface of silver, silver surface may be affected by corrosive gas environment, which will lead to difficult welding products.

Installation

Product is installed in the PCB, can not exert pressure on the pin.



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Soldering

Tin colloid can not be immersed in bath.

Heating process can not exert pressure on the pins have.

Recommended soldering conditions: wave soldering: 120 °C <60s, 260 °C <5s; hand soldering: 265 °C <5s, 340 °C <3s)

Clean

In any case, the washing time should be within the normal 1 minute.

Use of alcohol as a cleaning agent recommended cleaning products. Such as the use of other cleaning agents, it must first confirm whether the cleaners will corrode epoxy body. Freon can not be used as a cleaning agent.

Can not use water to clean, to avoid corrosion leads, we recommend the use of alcohol.

When using ultrasonic cleaning products, ultrasonic power and time should be less than 300W and 30 seconds, respectively; PCB and products can not touch the oscillator; you can not make the products on the PCB resonance.

This model is static sensitive devices, so static electricity and surge damage the product. An antistatic wrist strap when required, all devices, equipment, machines, tables, floors must be anti-static grounding