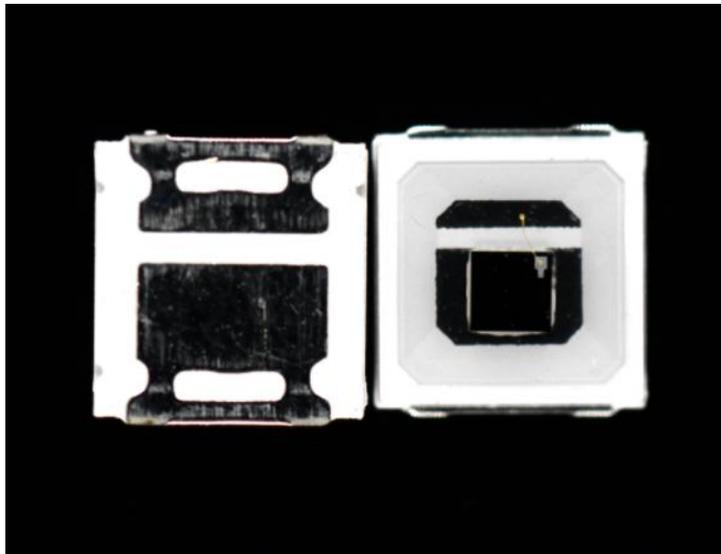


**TOP LED:5054PDC60
(SMD 5050 LED-Receiver)**



 **ATTENTION**
OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES



CUSTOMER APPROVED SIGNATURES	SALES APPROVED	APPROVED BY	CHECKED BY	PREPARED BY

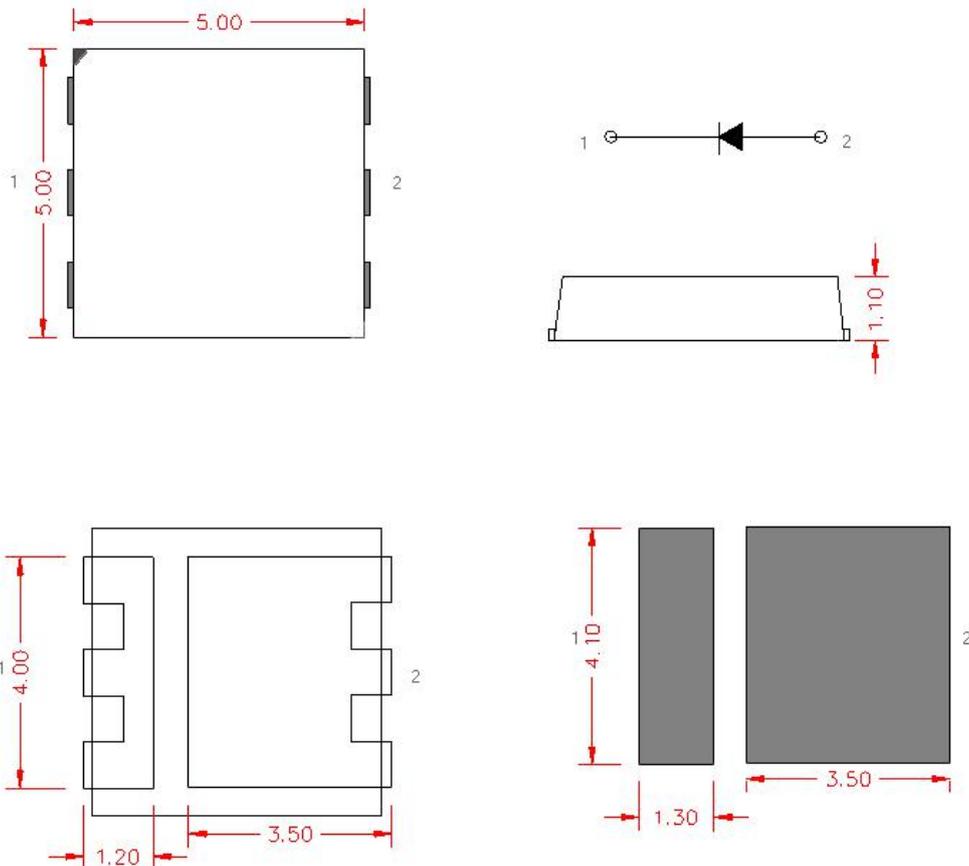
1. Features

- Lens: water clear
- Pb free
- Fast response time
- High photo sensitivity
- Meet ROHS, Green Product
- Compatible With Infrared Reflow Solder And Wave Solder Process

2. Description

- 5050PD is a high speed and high sensitive NIP silicon photo-diode molded in a standard 5050SMD package.
- Due to is water clear epoxy the device is sensitive to visible radiation.

3. Package Profile & Soldering PAD Suggested



Notes: 1. All dimensions are in millimeters ;
2. Tolerance is ± 0.10 mm unless otherwise noted.



4. Absolute Maximum Ratings At Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	Pc	150	mW
Operating Temperature	Topr	-25~+85	°C
Storage Temperature	Tstg	-40~+85	°C
Soldering Temperature(1/16 inch from body for 3 seconds)	Tsol	260	°C
Service life under normal conditions	Time	80000	H
Warranty	Time	2	Years
Antistatic bag	Piece	1000	Bag

*Soldering Condition:Soldering condition must be completed with 3 seconds at 260°C

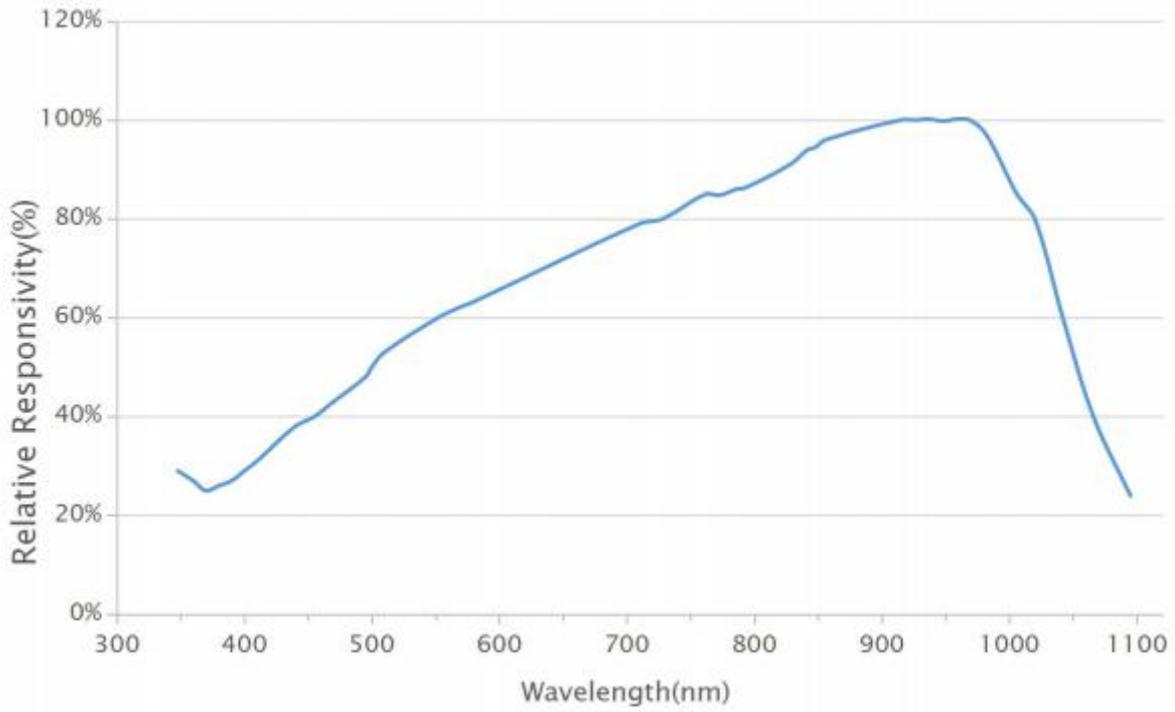
5. Electrical Optical Characteristics At Ta=25°C

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	VF	0.5		1.3	V	IF=10mA H=0
Reverse Breakdown Voltage	VBR	35			V	IR=100uA H=0
Reverse Dark Current	ID			10	uA	VR=10V H=0
Light Current	IL		80		nA	VR=5V Has 1mw/cm2
Wavelength of Peak Sensitivity	λp		940		nm	
Range of Spectral Bandwidth	$\lambda 0.5$	400		1000	nm	
Response Time	Rise Time	tR	50		μS	VCE=5V Ic=1mA RL=1000 Ω
	Fall Time	tF	50		μS	
Half sensitivity angle	$\Delta \lambda$		± 60		deg	
Junction Capacitance	CCB			12	PF	VR=3V F=1MHZ

*Luminous Intensity is measured by ZWL600.

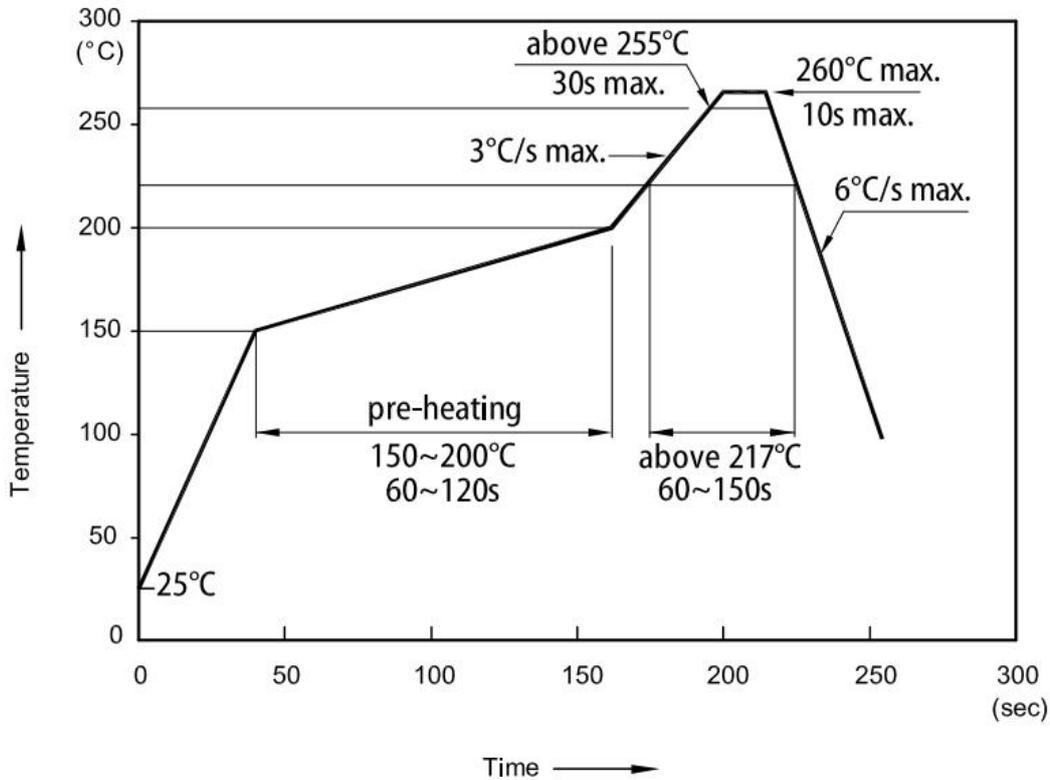
* $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

6.spectral response



7. SMD LED Technical Data

Reflow soldering profile for LEAD-FREE SMD process



Notes:

1. Don't cause stress to the LEDs while it is exposed to high temperature.
2. The maximum number of reflow soldering passes is 2 times
3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product

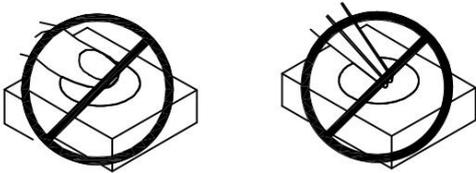
HANDLING PRECAUTIONS

Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.

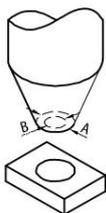


4. 4-A The inner diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks

4-B A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup

4-C The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production

4-D As silicone encapsulation is permeable to gases, some corrosive substances such as H₂S might corrode silver plating of leadframe. Special care should be taken if an LED with Silicone encapsulation is to be used near such substances.



5. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.

6. Product in the original sealed package is recommended to be assembled within 24 hours of opening.