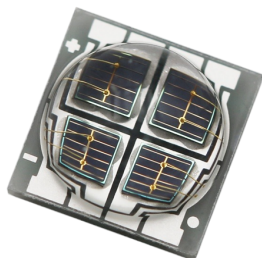


PRODUCT SPECIFICATION



Part No.: WL-5P5050EP120IR-830
SMD High Power LED

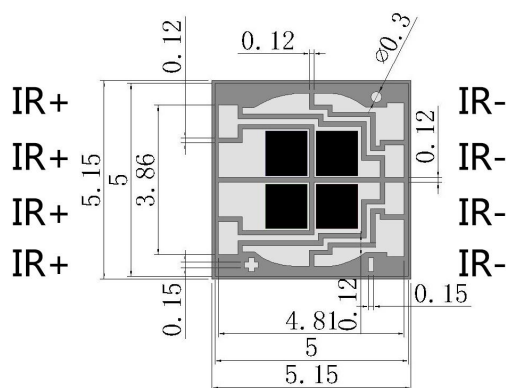
Catalog

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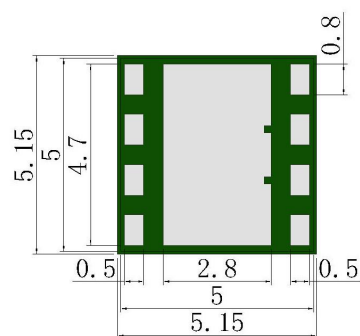
1.Product Features

- High Brightness IR LED Plane
- Viewing Angle 120 Degree
- Transparent Silicone
- Chip Material: AlGaAs
- RoHS Compliant

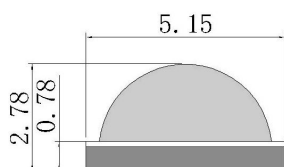
2.Dimensions



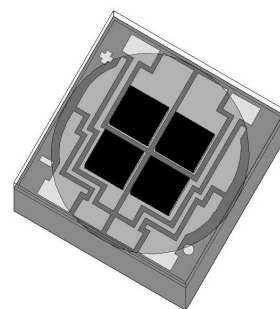
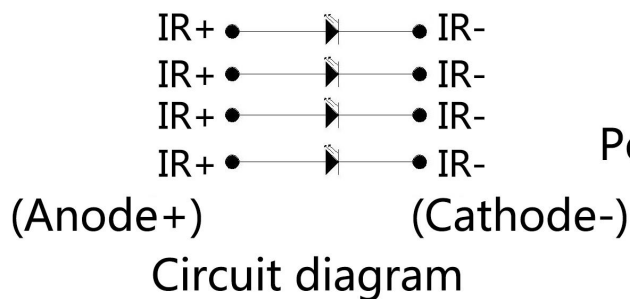
Top view



Bottom view



Side view



Perspective view

Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.

3. Absolute Maximum Rating @ Ta=25° C

Parameter	Symbol	Maximum Rating	Unit
Continuous Forward Current	IF	700	mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	IFp	1000	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	1.2	W
Electrostatic Discharge	ESD	1000	V
Operating Temperature Range	TOPR	-25°C to +80°C	
Storage Temperature Range	TSTG	-35°C to +100°C	
Lead Soldering Temperature	TSOL	260°C	

4. Optical Character @ Ta=25° C

Parameter	Symbol	Color	Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage	VF	IR	1.4	1.6	1.8	V	IF=700mA
Radiant Power	PO	IR	300	400	500	mW	IF=700mA
Peak Wavelength	WIP	IR	825	830	835	nm	IF=700mA
Reverse Current	IR		0		10	μA	VR=5V
Viewing Angle	2θ1/2				120	deg	IF=700mA
Recommend Forward Current	IF(rec)	IR			700	mA	

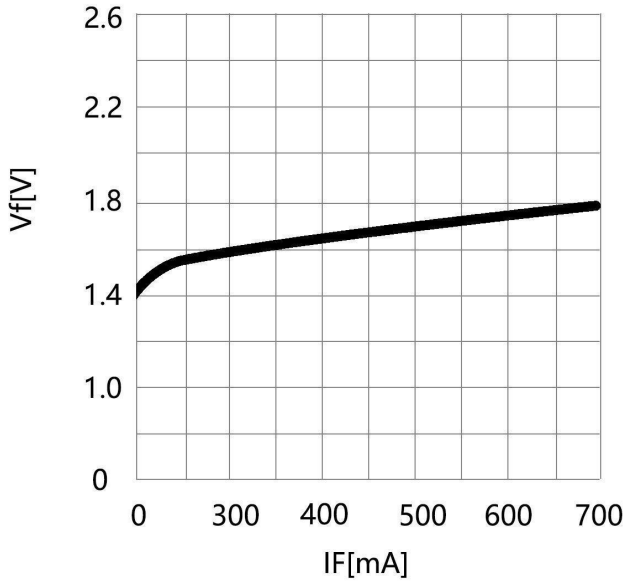
Notes:

Measurement tolerance of forward voltage ±0.1V

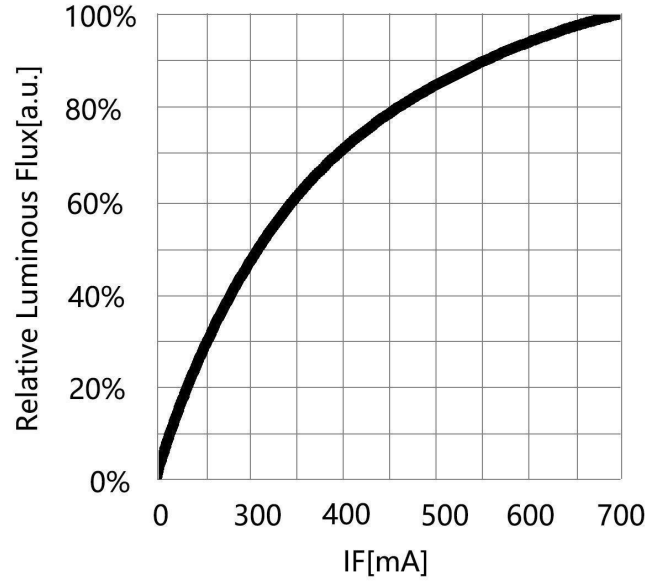
5. Optical Character Curves

(25 ° Ambient Temperature Unless Otherwise Noted)

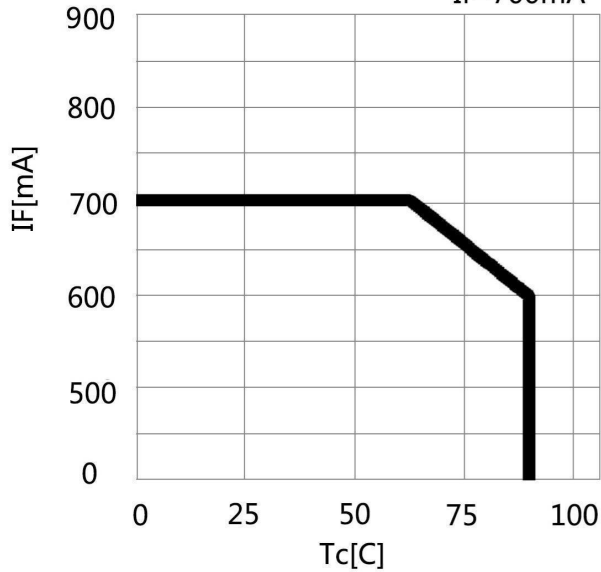
Forward Current vs. Forward Voltage
T_c=25C



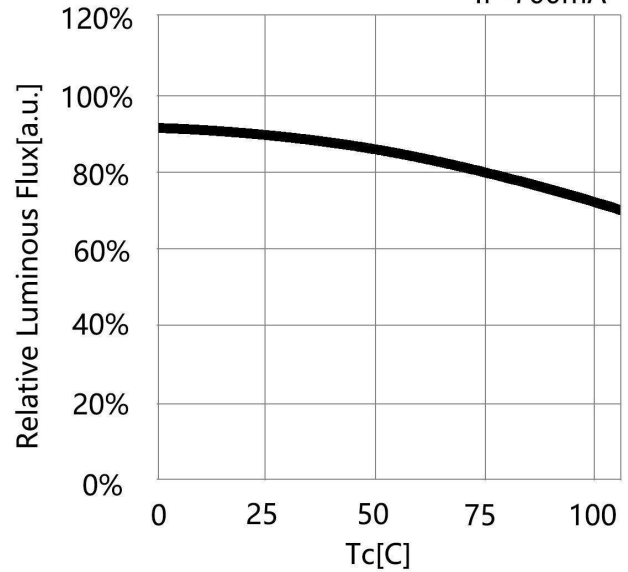
Forward Current vs. Relative Luminous Flux
T_c=25C



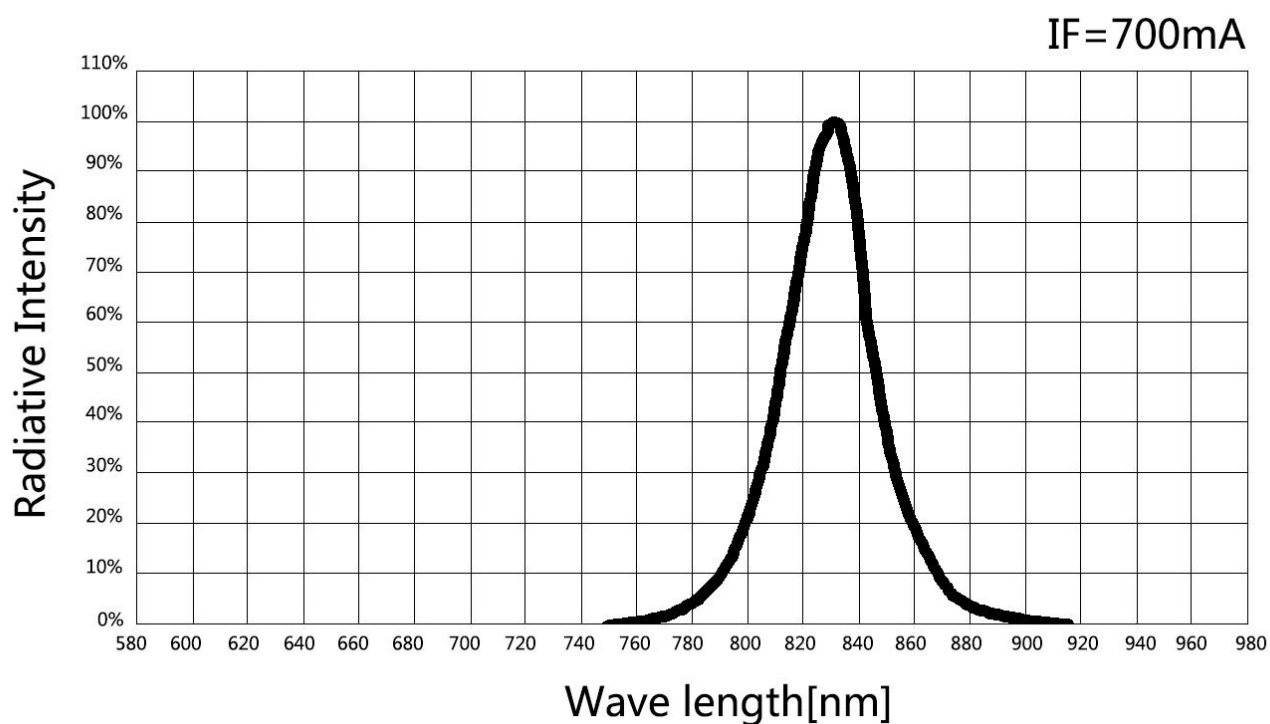
Case Temperature vs. Forward Current
I_f=700mA



Case Temperature vs. Relative Luminous Flux
I_f=700mA



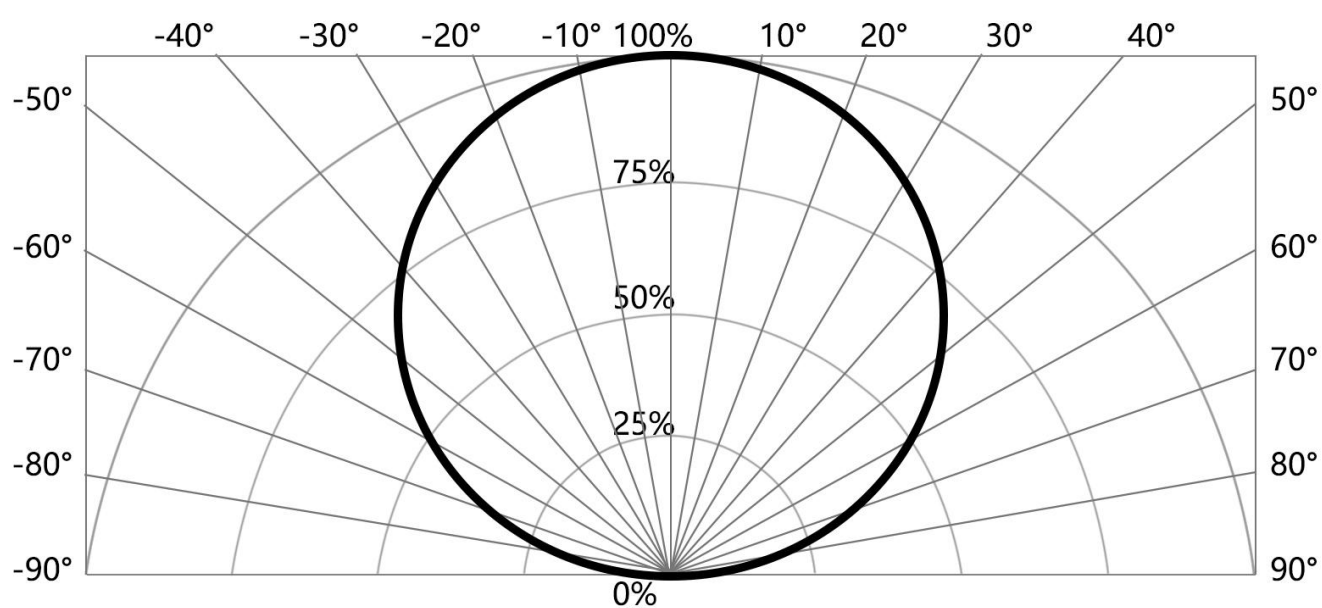
6. Spectrum Curves



7. Viewing Angle Curves

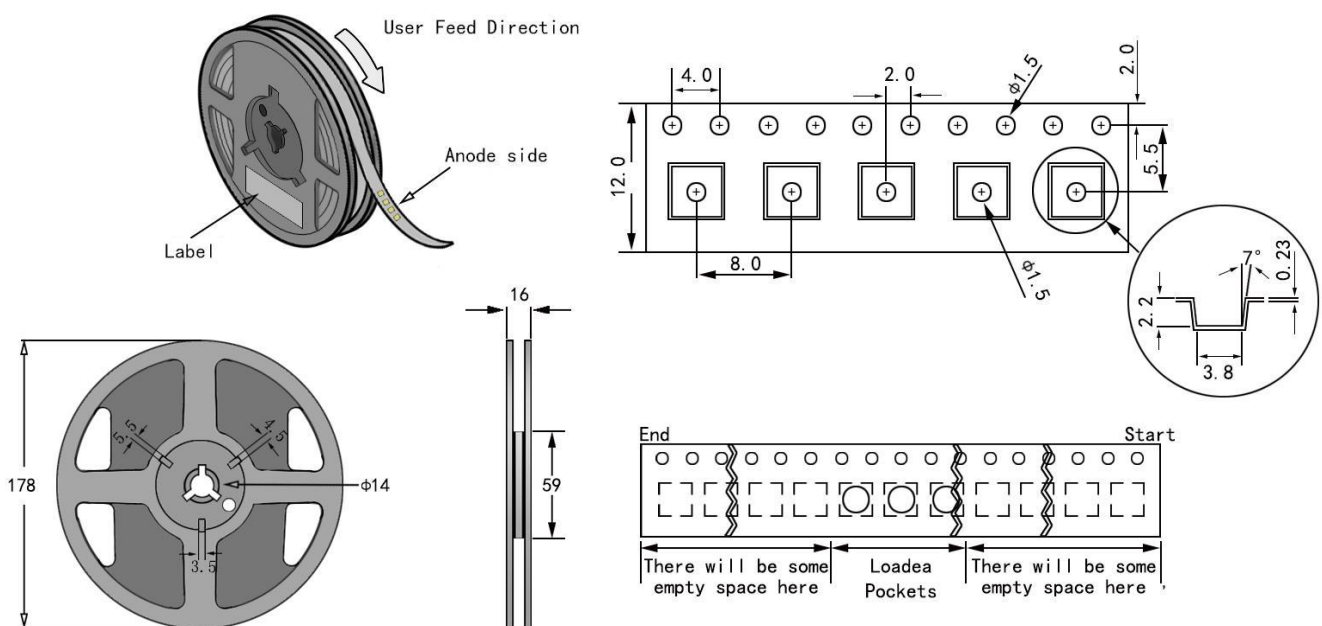
Radiation Characteristic

IF=700mA



8. Tape & Reel Packing

1. Recommend unpacked LED beads be welded within one day, if not, please vacuumize again and store in an environment of 20-35°C and 30-60% humidity. If can't vacuumize, please store LED beads in moisture proof box, control at 25°C±3°C, humidity 50-60%. If unpacked above 1 week, bake at 60±5°C for 10-12 hours before weld.

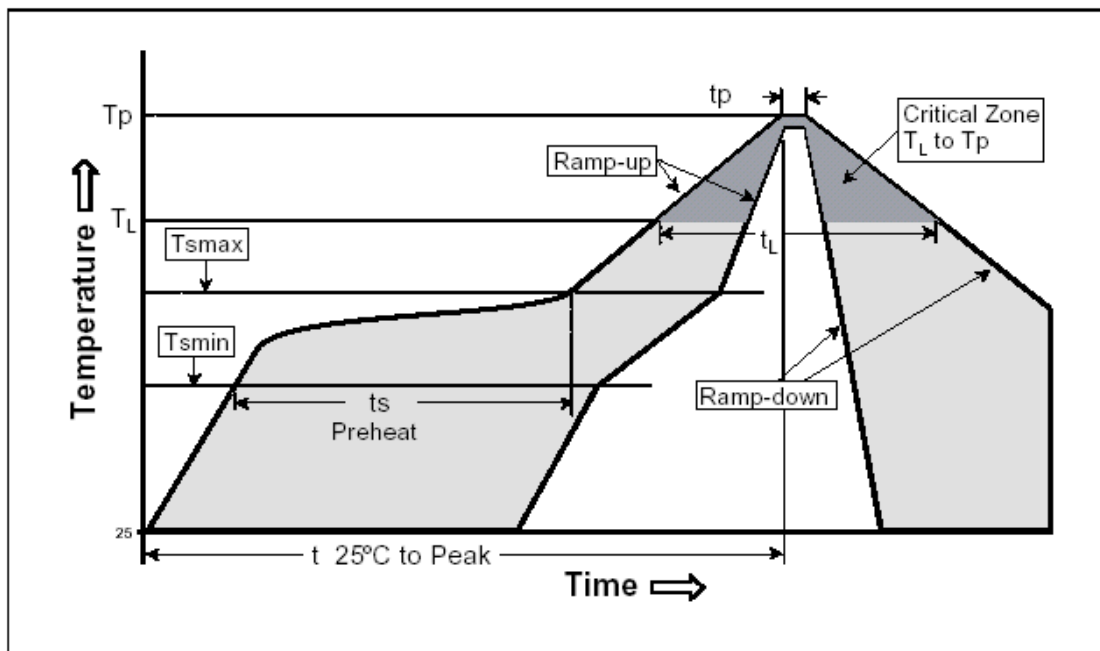


Notes:

1. QTY: 700pcs/Reel
2. Tolerance ±0.2mm.
3. Package: P/N

9.Soldering Advice

1. When soldering,don't touch the LED appearance gel during,this bad operation will destroy the LED.Moding LED usually use reflow soldering, please refer to the following reflow temperature curve , and recommend the user follow the soldering temperature curve of the solder paste.



Temperature Curve Character	Lead-free solder
Average heating rate(TSmin to Tp)	Top 3 °C / s
Preheating: Minimum temperature (TSmin)	90°C
Preheating: Maximum temperature (TSmax)	200°C
Preheating: Time (TSmin to TSmax)	60-180 s
Duration above temperature: Temperature TL	240°C
Duration above temperature: Time tL	60-150 s
Peak/classification temperature (Tp)	260°C
Time within 5°C of actual peak temperature (tp)	20-40 s
Cooling speed	The highest 6 °C / s
Time to reach peak temperature at 25°C	8 minutes Max

10. Cautions

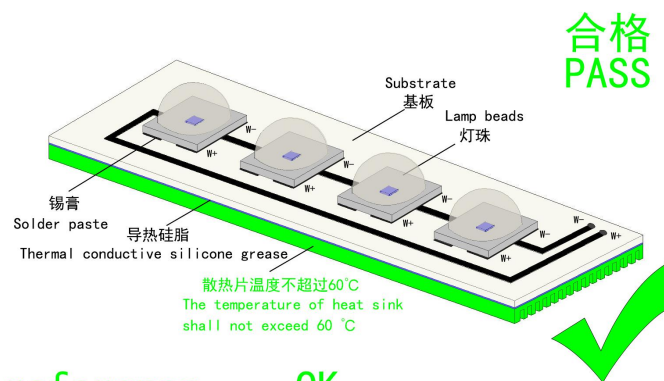
1. Electrostatic Treatment

Do a full range of anti-static measures (such as: anti-static ring, anti-static clothes, machine, equipment grounding wire, etc.)



2. Heat Dissipation

- A、It is recommend to configure reasonable heat dissipation device for the product.
- B、The best working temperature range of the product is 40-60°. It is recommended to control the working temperature of the product within a reasonable range.



3. Installation Conditions

reference OK

- A、Do not exert any pressure on the LED area during the use of the led beads. If the machine is used to take materials, select a suction nozzle of reasonable size, such as below:

