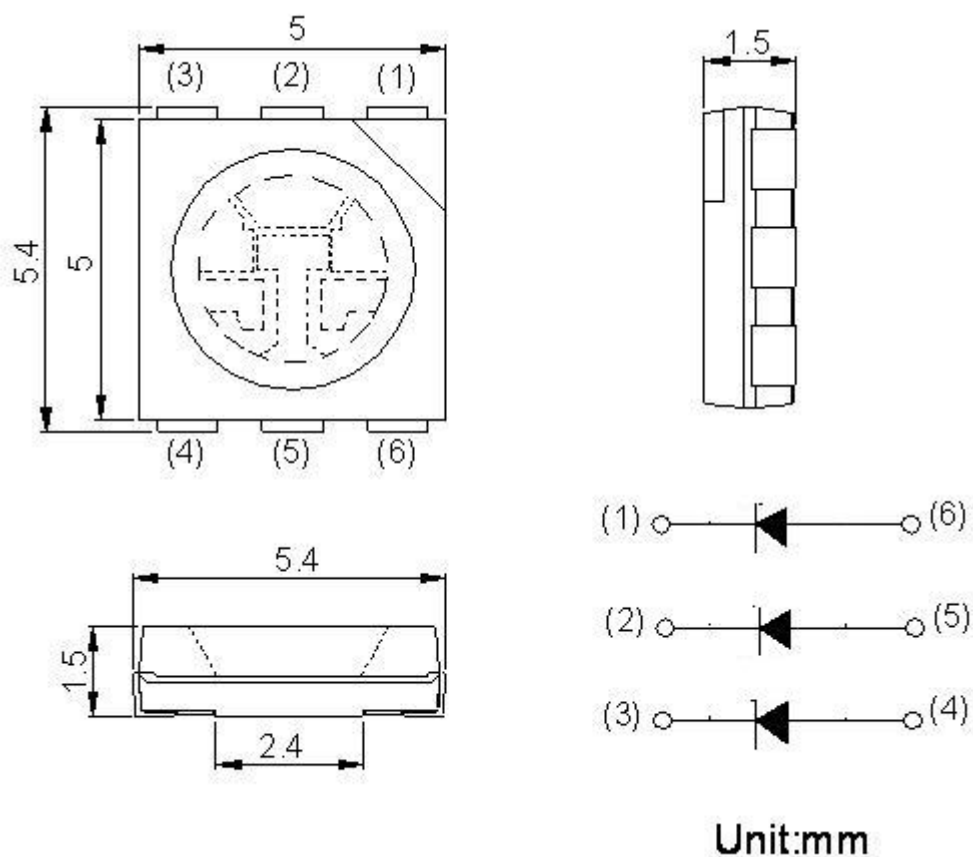


365nm UV SMD5050 LED datasheet

◆ Features

- * High brightness surface mount technology.
- * Emitting view angle 120°
- * Suitable for all SMT assembly method.
- * IR reflow soldering and vapor phase reflow soldering.
- * For outdoor and indoor display, backlight application.

◆ Package Dimensions



Notes:

1. All dimensions are in mm.
2. Tolerance is ± 0.25 mm unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.

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◆ Description

Model No.	Material	Emitted	Lens Color
XL5050UVC3C/365	InGaN/Sapphire	UV	Water clear

◆ Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Rating	Unit
Power Dissipation	P_D	200	mW
Forward Current (DC)	I_F	60	mA
Peak Forward Current *	I_{FP}	200	mA
Reverse Voltage	V_R	5.0	V
Operation Temperature Range	T_{op}	-25 to+75	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-40to+100	$^{\circ}\text{C}$
Soldering Temperature	260 $^{\circ}\text{C}$ /5sec		

* Pulse width \leq 0.1msec Duty Ratio \leq 1/10

◆ Electrical and Optical Characteristics ($T_A=25^{\circ}\text{C}$)

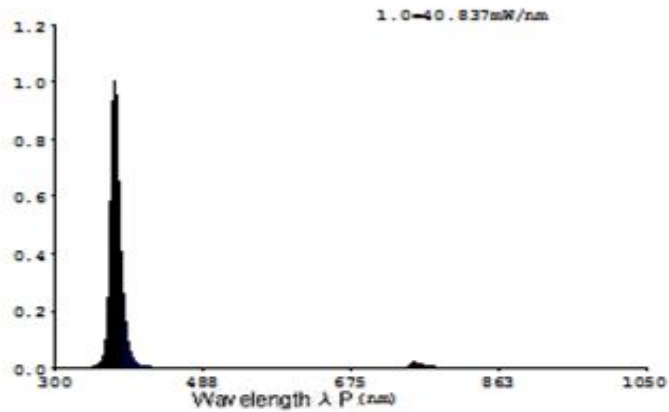
Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Forward Voltage(V_F)	$I_F=60\text{mA}$	V_F	3.4	----	4.0	V
View Angle	$I_F=60\text{mA}$	$2\theta\ 1/2$	----	120	----	deg
Reverse Current	$V_R=-5\text{V}$	I_R	----	----	2	μA
Peak Wavelength	$I_F=60\text{mA}$	wl	365	----	370	nm
Luminous Intensity(I_v)	$I_F=60\text{mA}$	I_v	4	----	10	Mw

Notes:

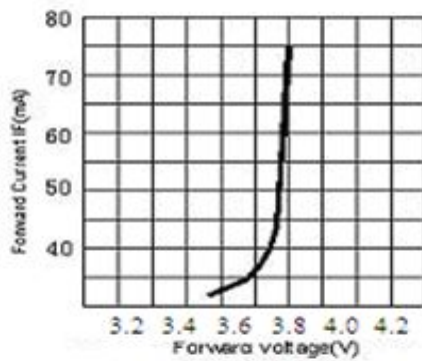
- 1.The peak Wavelength, λ_p is derived from the CIE chromaticity diagram and represents the single wavelength which define the color of the device.
2. $2\theta\ 1/2$ is the off-axis angle where the luminous intensity is one half the on-axis intensity.
- 3.Luminous intensity is measured by SEALAND equipment on Top LED in the same lot.

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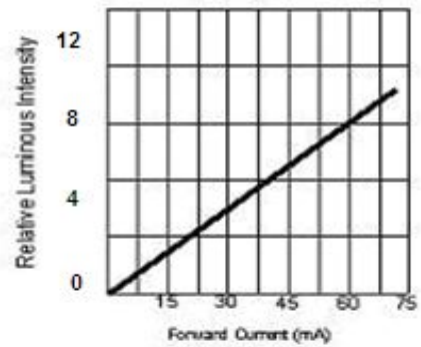
Typical Electrical/Optical Characteristic Curves($I_f=60\text{mA}; T_A=25^\circ\text{C}$)



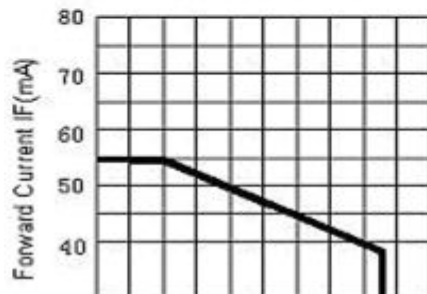
Forward Current vs. Forward Voltage



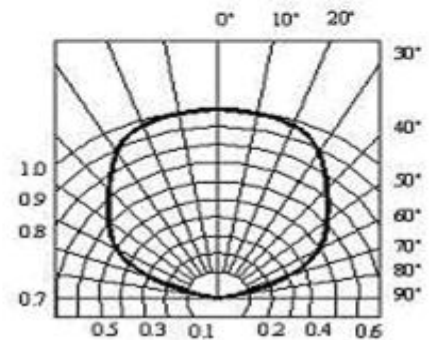
Relative Luminous Intensity vs. Forward Current



Ambient Temperature VS. Forward Current



Radiation Diagram



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Reliability performance

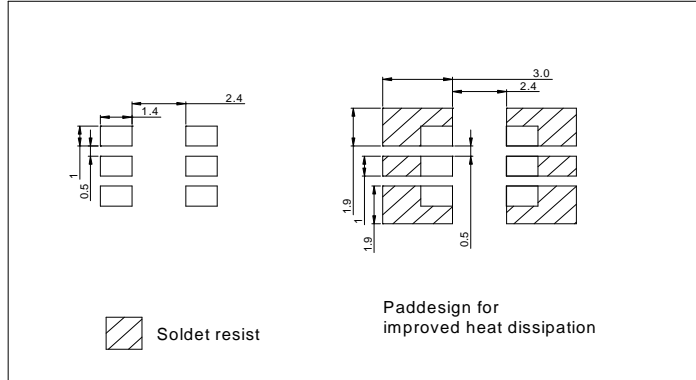
Test items and result

Test classification	Test item	Test condionts	Test duration	Sample size	AC/RE
Life test	Room temperature DC operating life test	Ta=25±5°C IF=60mA	1000hrs	30pcs	0/1
Environment test	Thermal shock Test	-10±5°C ← → +100±5°C 5min 10sec 5min	50cysles	30pcs	0/1
	Temperature cycle test	-40±5°C ← → +85±5°C 30min 5sec 30min	50cysles	30pcs	0/1
	High temperature & High humidity test	Ta=85±5°C RH=85%±0.5%RH	1000hrs	30pcs	0/1
	High temperature storage	Ta =100±5 °C	1000hrs	30pcs	0/1
	Low temperature storage	Ta =-55±5°C	1000hrs	30pcs	0/1
Mechanical test	Resistance to soldering heat	Ta =230±5°C	5sec	30pcs	0/1
	Lead integrity	Load 2.5N(0.25KGf) 0 °C ∞ 90 °C ∞ 0°C	3times	30pcs	0/1

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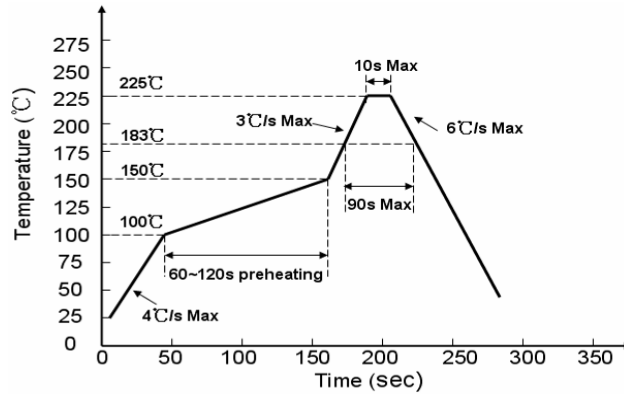
◆ PRECAUTION IN USE

Recommended solder pad:

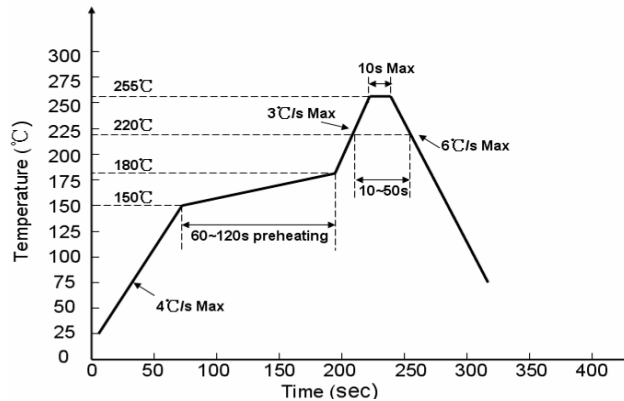


Vapor Phase Reflow Soldering Profile:

For Lead Solder:

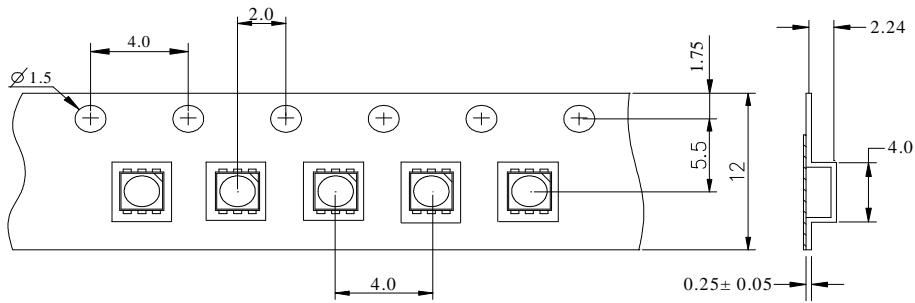


For Lead Free Solder:

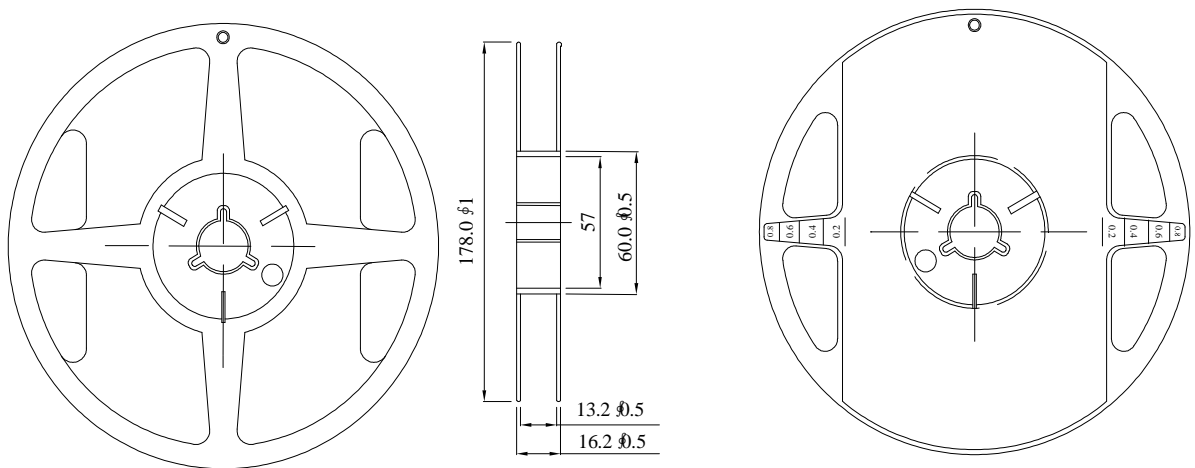


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◆ Dimensions for Tape



◆ Dimensions for Reel



Notes:

1. All dimensions are in mm, tolerance is ± 2.0 mm unless otherwise noted.
2. Specifications are subject to change without notice.