

SPECIFICATION FOR SURFACE MOUNTED LED

Company Name: _____

Customer No.: _____

Part No.: 5050-3-03-RGB _____

Date: _____

Remarks: _____

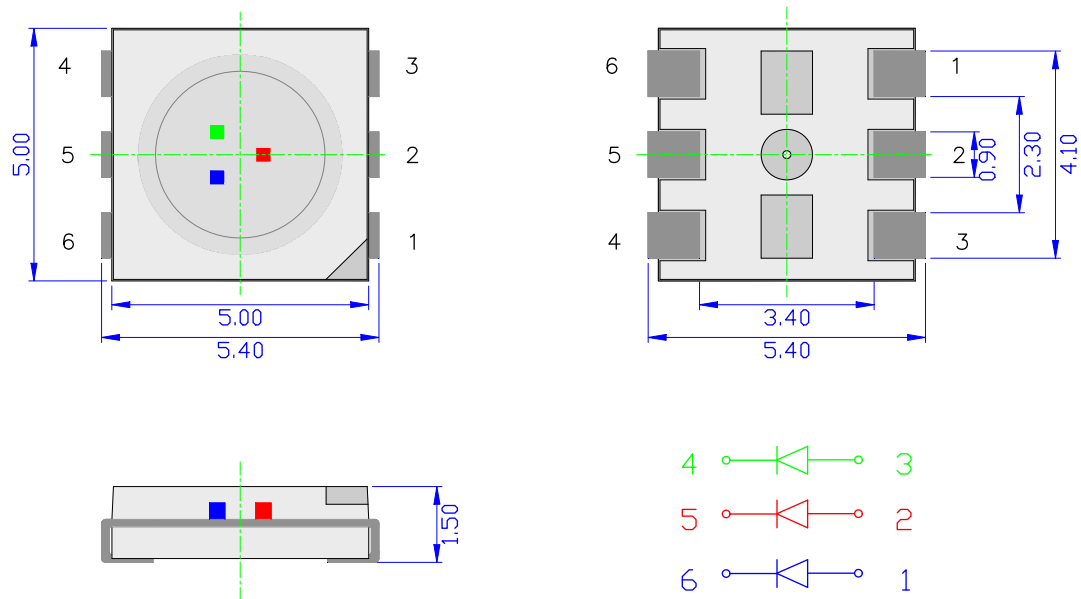
CUSTOMER APPROVED BY				
Department				
Signature				
Date				

	APPROVED BY	CHECKED BY	PREPARED BY
Signature			
Date			

■ Device Selection Guide:

Part No.	SMD Size	Emitted Color	Lens Color
5050-3-03-RGB	5.0X5.4X1.5mm	Red/ Green /Blue	Water Clear

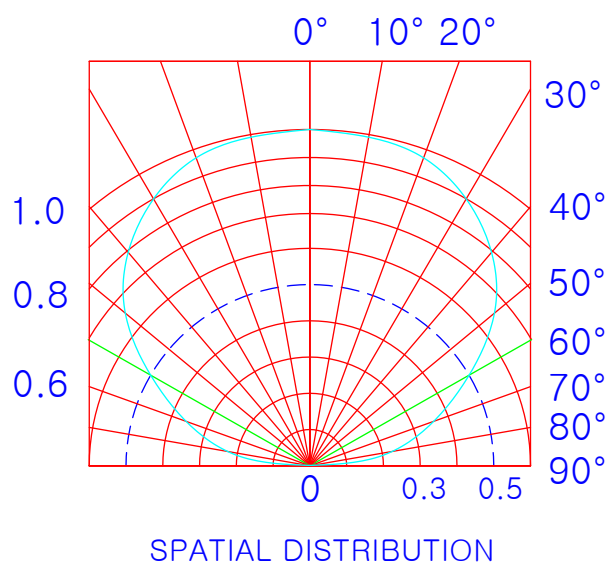
■ Outline Dimension:



NOTES :

1. All dimensions are in millimeters (inches);
2. Tolerances are ± 0.1 mm unless otherwise noted.

■ View Angle:



■ Device Selection Guide:

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■ Typical Electrical & Optical Characteristics(Ta=25°)

Items	Symbol	Condition	Device	Min	Typ	Max	Unit
Forward Voltage	VF	IF=20mA	Red	2.0	---	2.4	V
		IF=20mA	Green	2.8	---	3.05	
		IF=20mA	Blue	3.1	---	3.35	
Reverse Current	IR	VR =12V		---	---	0.5	μ A
Dominant Wavelength	λ d	IF=20mA	Red	619	---	625	nm
		IF=20mA	Green	509	---	517	
		IF=20mA	Blue	460	---	467	
Luminous Intensity	Iv	IF=20mA	Red	176	---	299	mcd
		IF=20mA	Green	700	---	1190	
		IF=20mA	Blue	170	---	289	
View Angle	2θ1/2	IF=20mA		---	120	---	Deg

■ Absolute Maximum Ratings (Ta = 25°C)

Items	Symbol	Absolute maximum Rating			Unit
		Red	Green	Blue	
Power Dissipation	PD	105	125	120	mW
Forward Current(DC)	IF	30	30	30	mA
Peak Forward Current	IFP	115	120	120	mA
Reverse Voltage	VR	5			V
Operation Temperature	Topr	- 40 ~ + 85			°C
Storage Temperature	Tstg	- 40 ~ + 85			°C

NOTE::

1/10 Duty Cycle, 0.1 ms Pulse Width.

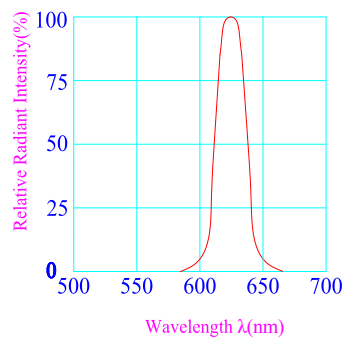
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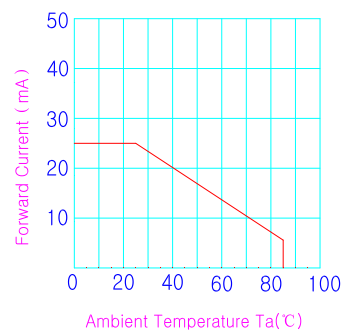
■ Typical Electrical/Optical Characteristics Curves:

Red:

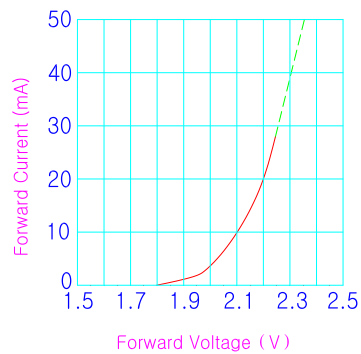
Relative Intensity Vs. Wavelength (Ta=25°C)



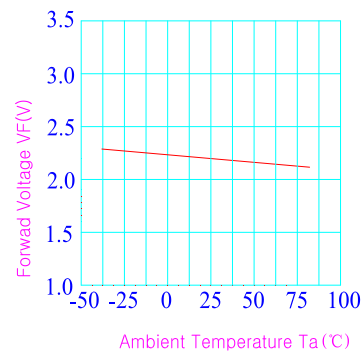
Forward Current Vs. Ambient Temperature



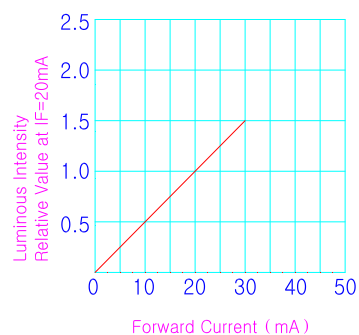
Forward Current Vs. Forward Voltage



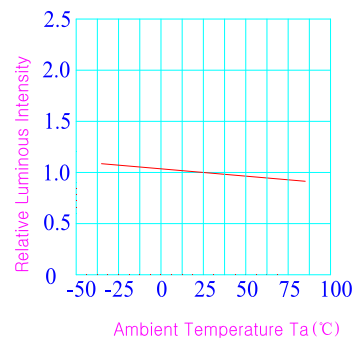
Forward Voltage Vs. Ambient Temperature



Luminous Intensity Vs. Forward Current



Luminous Intensity Vs. Ambient Temperature



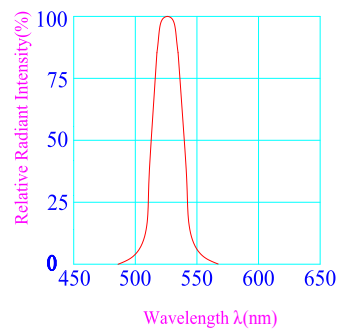
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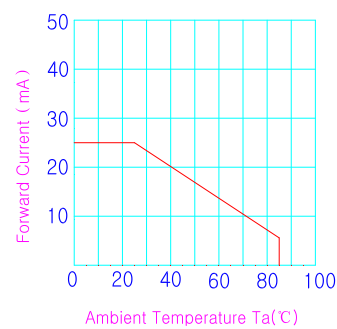
■ Typical Electrical/Optical Characteristics Curves:

Green:

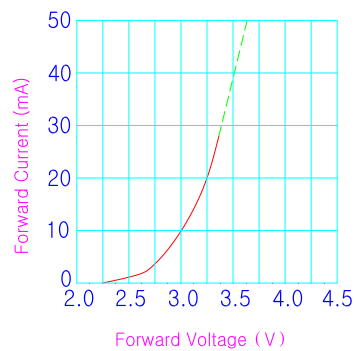
Relative Intensity Vs. Wavelength (Ta=25°C)



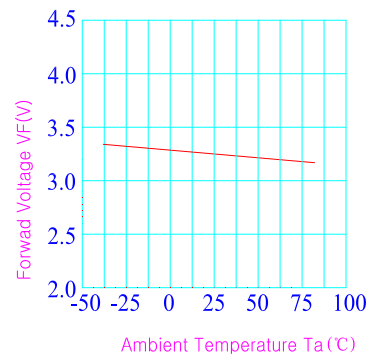
Forward Current Vs. Ambient Temperature



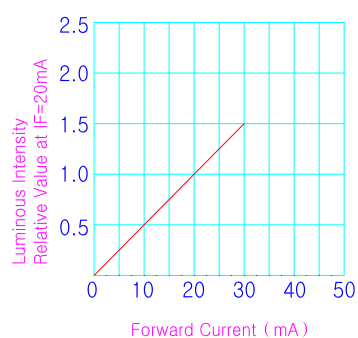
Forward Current Vs. Forward Voltage



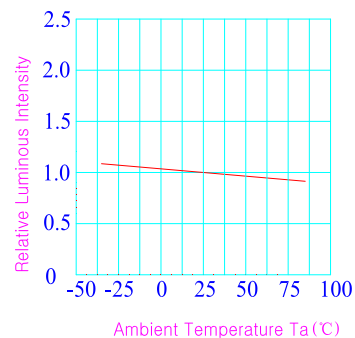
Forward Voltage Vs. Ambient Temperature



Luminous Intensity Vs. Forward Current



Luminous Intensity Vs. Ambient Temperature



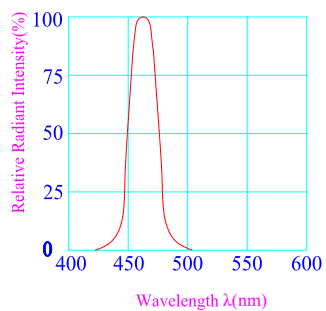
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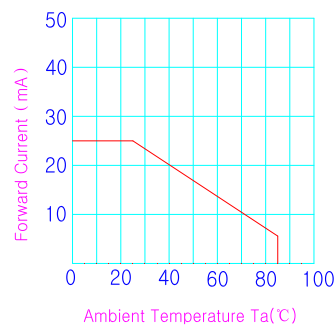
■ Typical Electrical/Optical Characteristics Curves:

Blue:

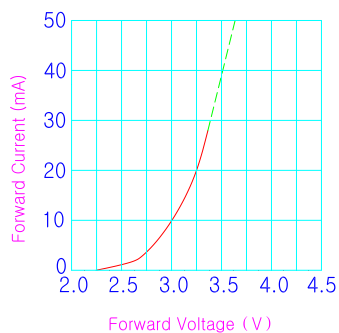
Relative Intensity Vs. Wavelength (Ta=25°C)



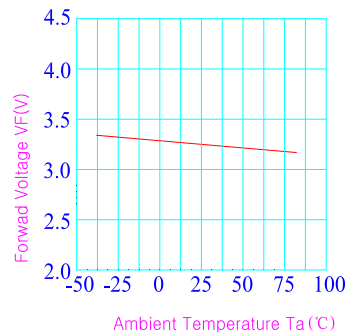
Forward Current Vs. Ambient Temperature



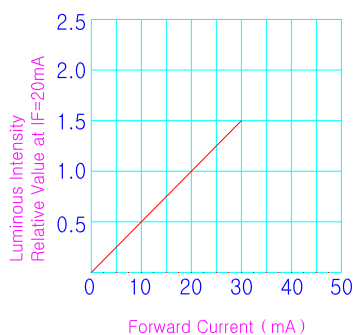
Forward Current Vs. Forward Voltage



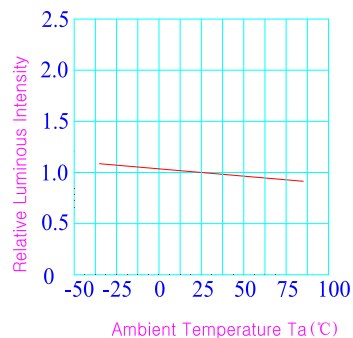
Forward Voltage Vs. Ambient Temperature



Luminous Intensity Vs. Forward Current



Luminous Intensity Vs. Ambient Temperature



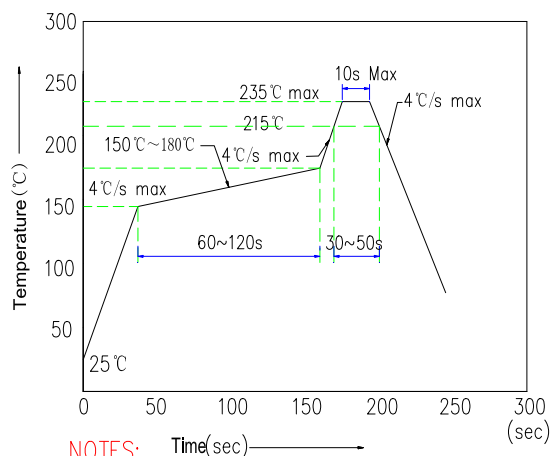
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■ Reliability Test :

Classification	Test Item	Test Conditions	Duration	Units Tested	Number of Damaged
Life Test	Operating Life Test	Ta =25°C±5°C, RH=55±20%RH, IF=30mA	1000hrs	22	0/22
Environment Test	High Temperature Storage	Ta =100°C ± 10°C	1000hrs	22	0/22
	Low Temperature Storage	Ta = - 40°C ⁺³ ₋₅ °C	1000hrs	22	0/22
	Temp & Humidity Storage	Ta =85°C ⁺⁵ ₋₃ °C RH=85 ⁺⁵ ₋₁₀ %RH	1000hrs	22	0/22
	Thermal Shock Test	Ta= - 40°C ⁺⁵ ₋₃ °C ~ 100°C ⁺³ ₋₅ °C T=5min - 5min	100 Cycles	22	0/22
	Temperature Cycling Test	Ta= - 40 ⁺³ ₋₅ °C ~ 25°C ~ 100 ⁺⁵ ₋₃ °C ~25°C T=30min-5min-30min- 5min	10Cycles	22	0/22

Reflow Soldering Profile For Lead-free SMT Process.



NOTES: Time(sec) →

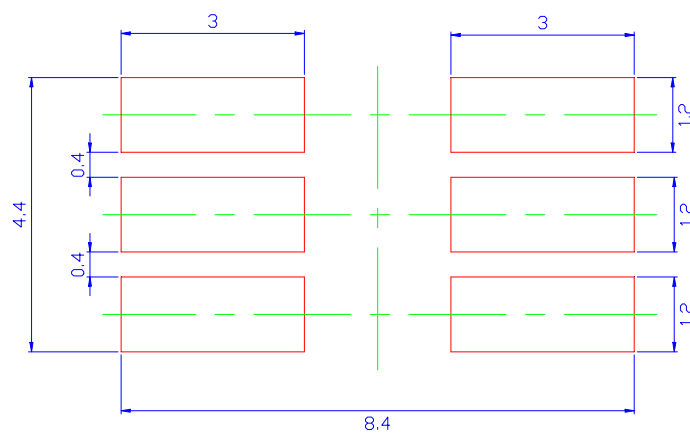
1. We recommend the reflow temperature 230°C(±5°C). The maximum soldering temperature should be limited to 235°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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5050-3-03-RGB	5.0X5.4X1.5mm	Red/ Green /Blue	Water Clear

■ Recommended Soldering Pattern:

(Units:mm)



■ Tape Specifications:

(Units:mm)

