Part No.：JSL-3528RGBC-6P

Features：

- Long life solid state reliability.
- Low power consumption
- I.C.compatible.
- Compliance with EU REACH.
- RoHs Compliant
- PLCC6 Package
- White Package

Descriptions：

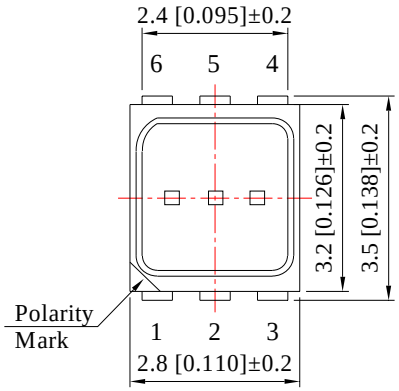
- Emitting Color：RGB Color
- Device Outline：3.5x2.8x1.8mm
- Lens Type：Water Clear.
- The designed for avariety of applications where require dual illumination.

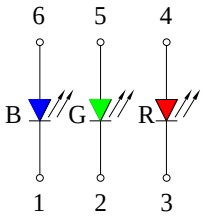
Application：

- Circuit board.
- Indicators.
- Led Sign.
- Home appliance.
- LED Strip Lighting.

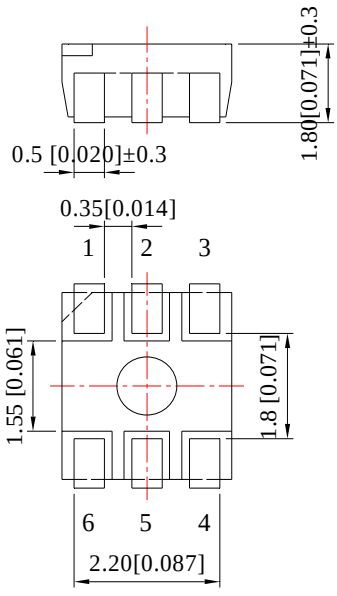
Part No.：JSL-3528RGBC-6P

Package Dimension：

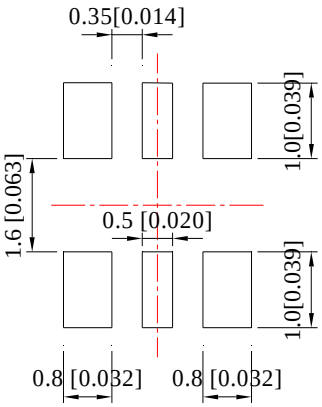




Polarity



Recommended Soldering Pad Dimensions



Notes:

1. All dimensions are millimeters/单位：mm.
2. Tolerance is +/-0.25mm unless otherwise noted/
没有标注的公差均为±0.25mm

Part No.: JSL-3528RGBC-6P

Absolute maximum ratings（Ta = 25℃）

Parameter	Symbol	Test Condition	Values		Unit
			Min.	Max.	
Reverse Voltage	V_R	I_R = 30 μA	----	5	V
Forward Current	I_F	----	----	25	mA
Power Dissipation	Red	Pd	——	60	mW
	Green			90	
	Blue			90	
Pulse Current	I_{peak}	Duty=0.1mS，1kHz	----	100	mA
Operating Temperature	T_{opr}	----	-40	+85	℃
Storage Temperature	T_{str}	----	-40	+85	℃

Electrical and optical characteristics（Ta = 25℃）

Parameter	Symbol	Test Condition	Color	Value			Unit
				Min.	Typ.	Max.	
Forward Voltage	V_F	I_F = 20mA	Red	1.8	2.0	2.4	V
			Green	2.6	3.0	3.4	
			Blue	2.6	3.0	3.4	
Reverse Current	I_R	V_R = 5V		---	---	5	μA
Dominate Wavelength	λ_d	I_F = 20mA	Red	---	624	---	nm
			Green	---	525	---	
			Blue	---	470	---	
Peak Wavelength	λ_p	I_F = 20mA	Red	---	632	---	nm
			Green	---	520	---	
			Blue	---	468	---	
Spectral Line half-width	$\Delta\lambda$	I_F=20mA		---	20	---	nm
Luminous Intensity	I_V	I_F = 20mA	Red	400	600	---	mcd
			Green	1500	1800	---	
			Blue	300	500		
Viewing Angle	$2\theta 1/2$	I_F = 20mA		---	120	---	deg

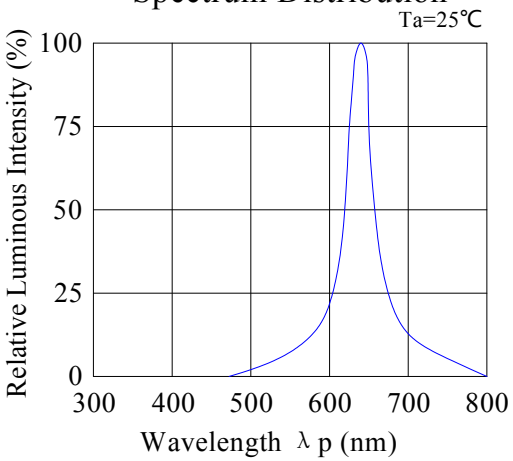
Part No.: JSL-3528RGBC-6P

Typical electrical/optical characteristic curves:

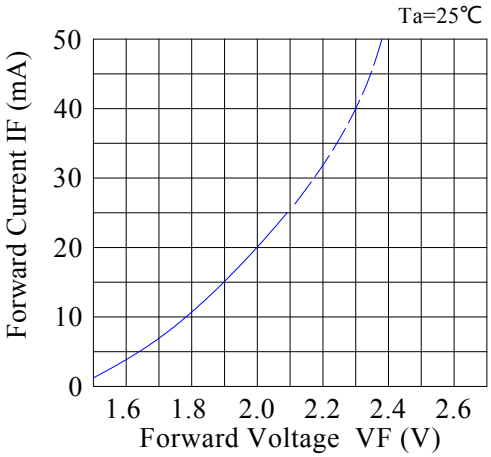
(25℃ Ambient Temperature Unless Otherwise Noted)

Red:

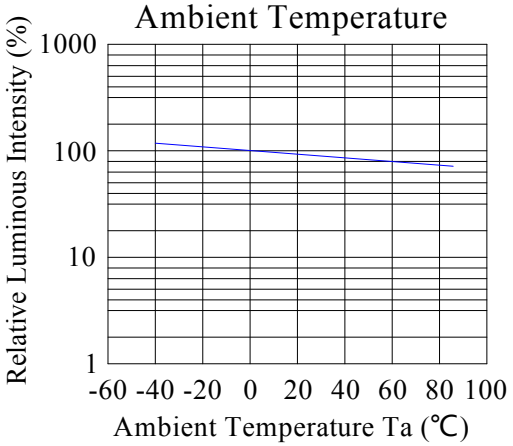
Spectrum Distribution



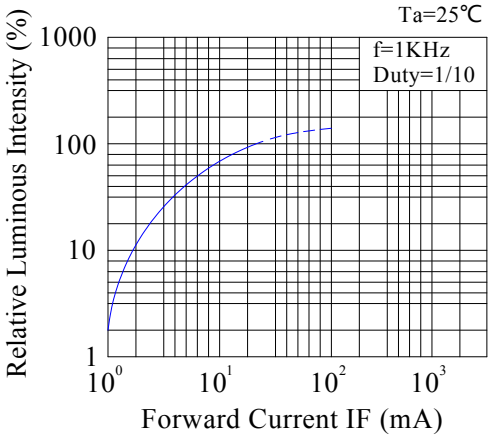
Forward Current & Forward Voltage



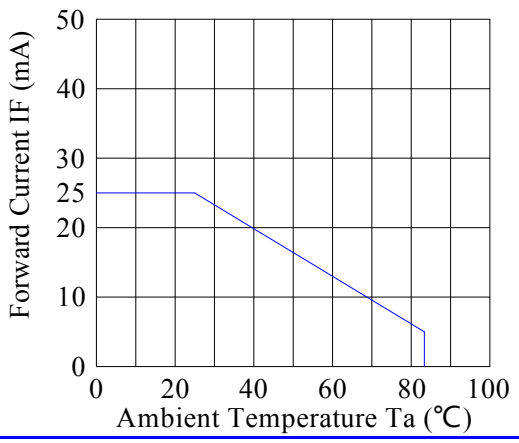
Luminous Intensity & Ambient Temperature



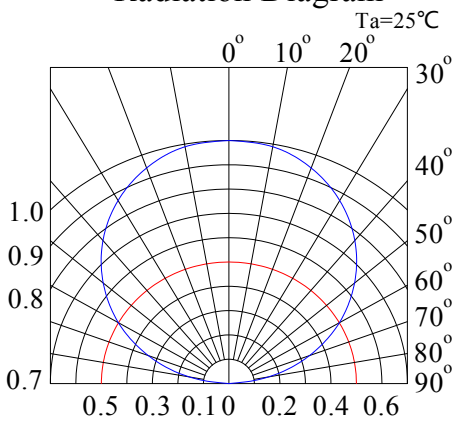
Luminous Intensity & Forward Current



Forward Current Derating Curve



Radiation Diagram



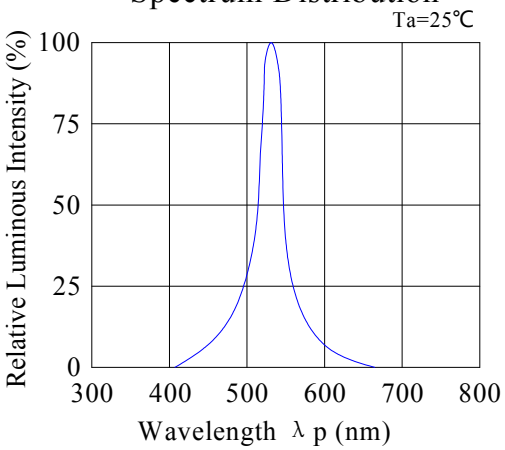
Part No.: JSL-3528RGBC-6P

Typical electrical/optical characteristic curves:

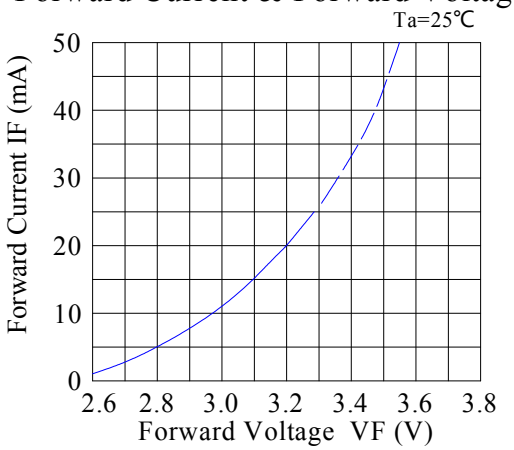
(25℃ Ambient Temperature Unless Otherwise Noted)

Pure Green

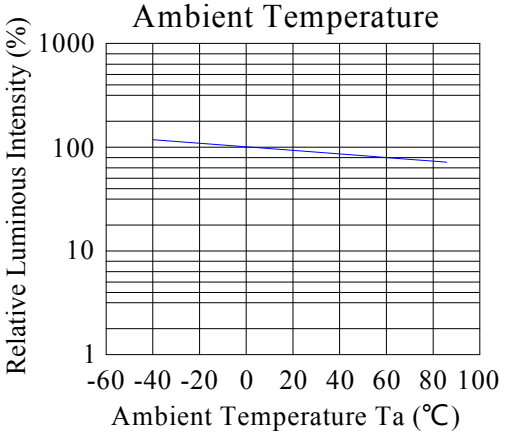
Spectrum Distribution



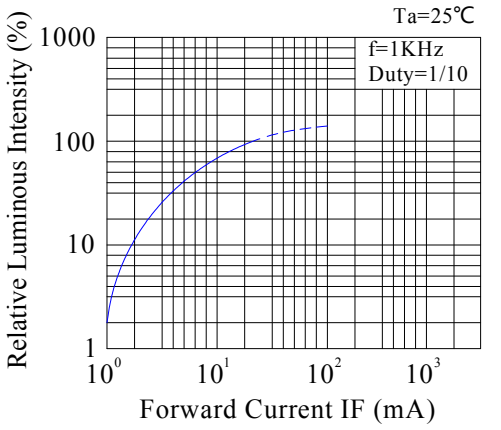
Forward Current & Forward Voltage



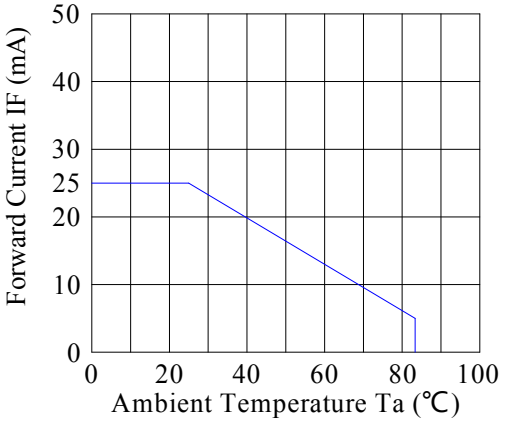
Luminous Intensity & Ambient Temperature



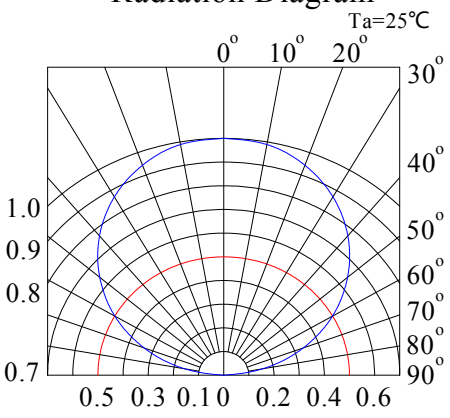
Luminous Intensity & Forward Current



Forward Current Derating Curve



Radiation Diagram



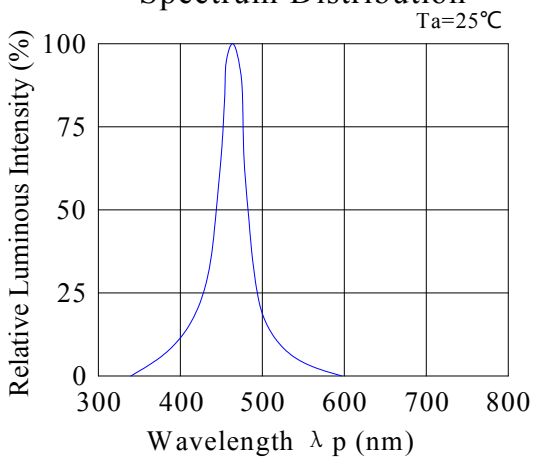
Part No.: JSL-3528RGBC-6P

Typical electrical/optical characteristic curves:

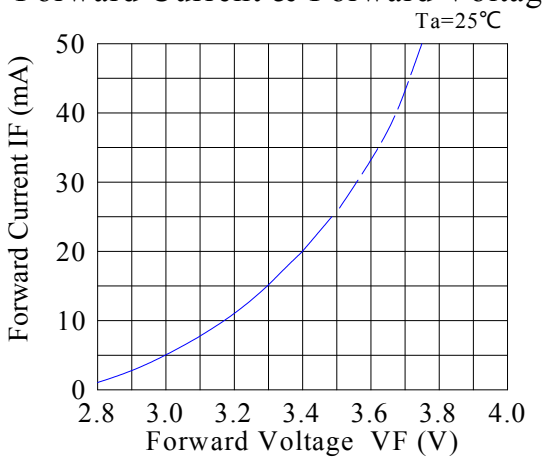
(25℃ Ambient Temperature Unless Otherwise Noted)

Blue:

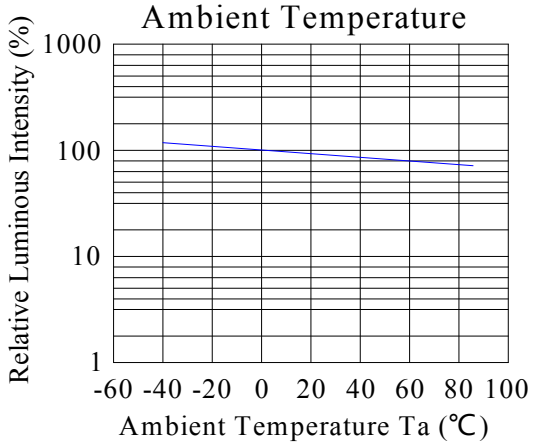
Spectrum Distribution



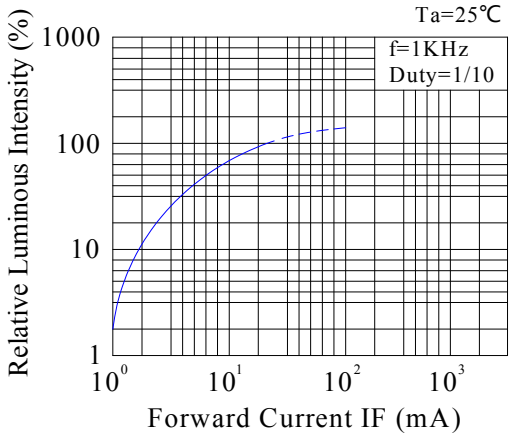
Forward Current & Forward Voltage



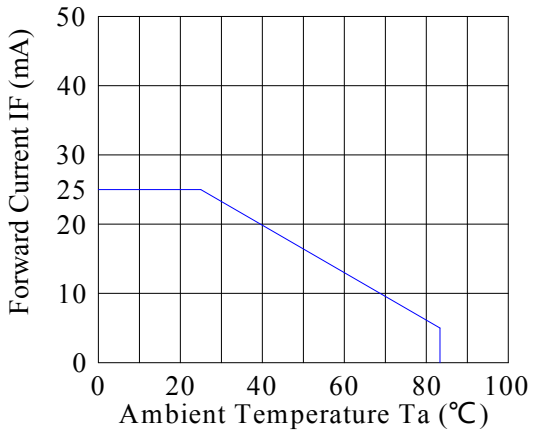
Luminous Intensity & Ambient Temperature



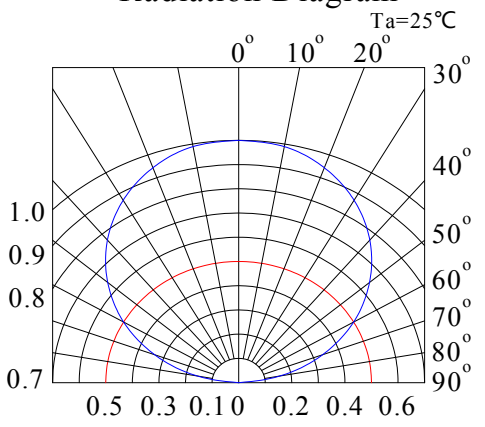
Luminous Intensity & Forward Current



Forward Current Derating Curve

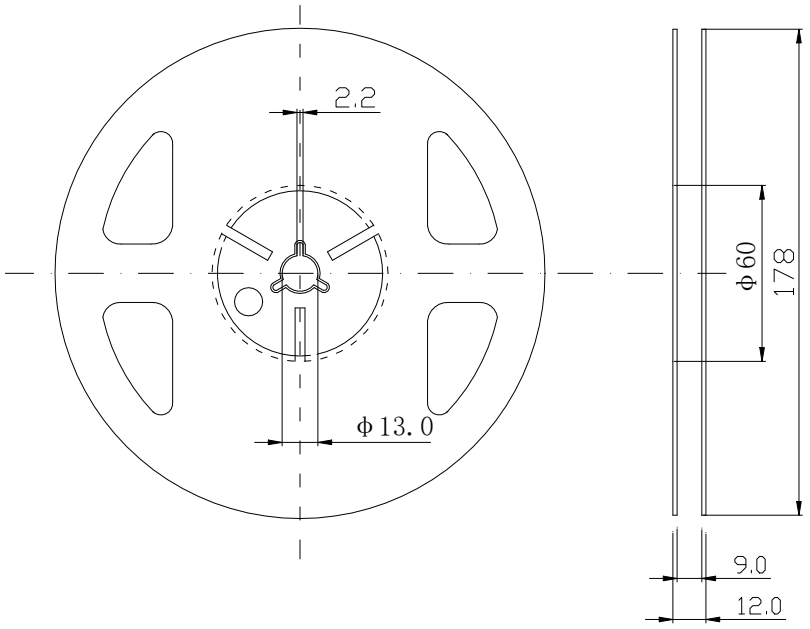


Radiation Diagram

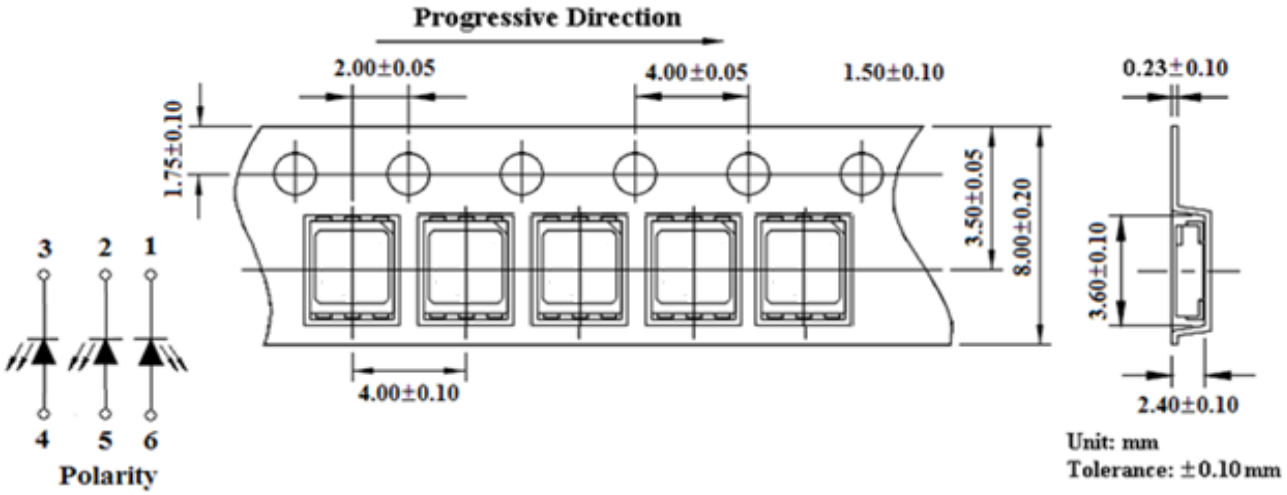


Part No.: JSL-3528RGBC-6P

Reel And Tape Dimensions:

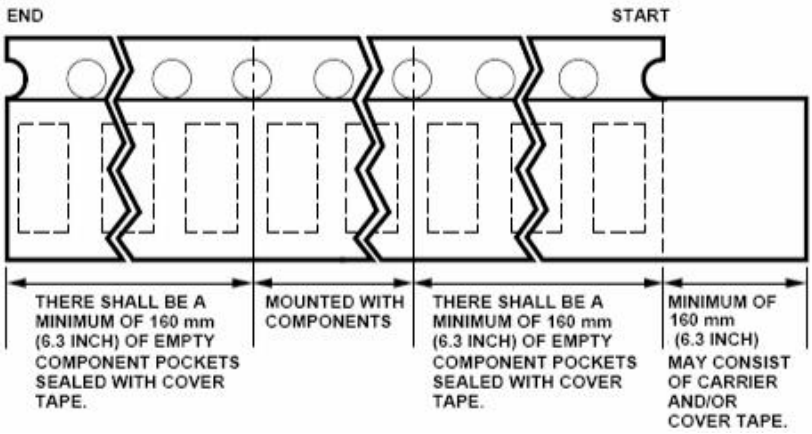


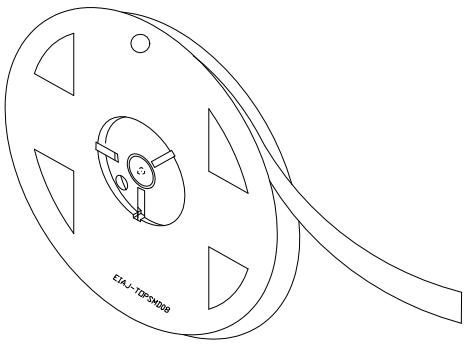
Loaded quantity 2000 pcs per reel.

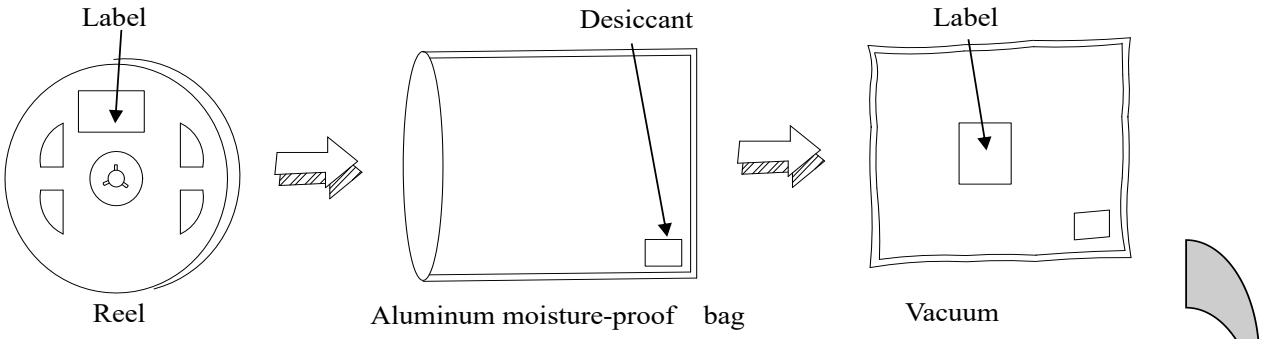


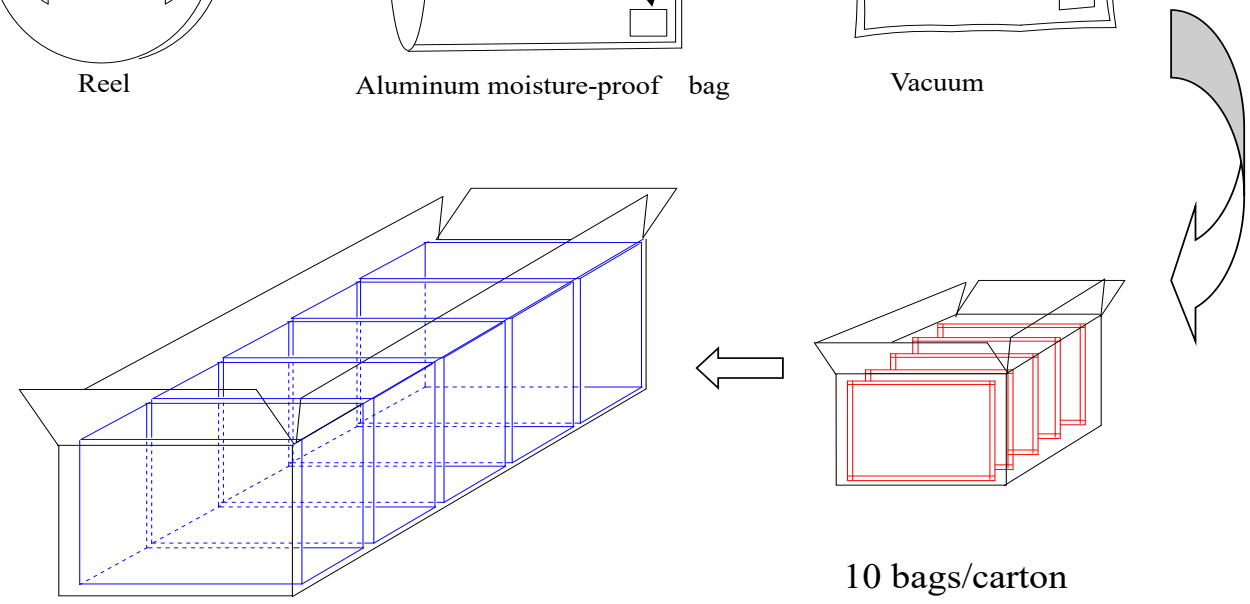
Part No.: JSL-3528RGBC-6P

Packaging:









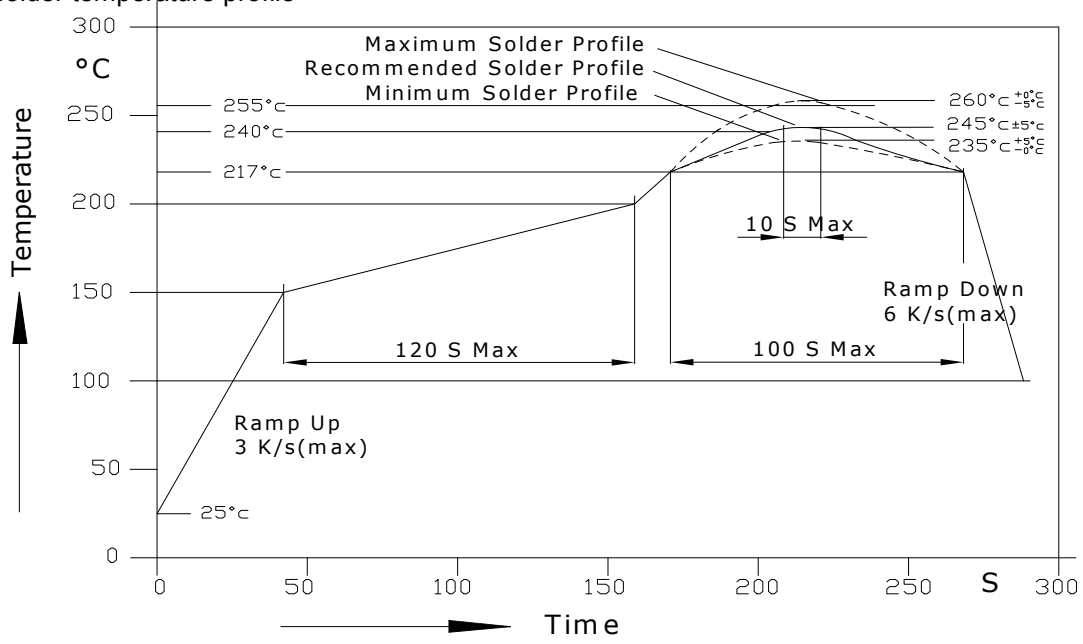
10 bags/carton

5 cartons/box

Part No.: JSL-3528RGBC-6P

Soldering Profile Suggested:

1. Pb-free solder temperature profile



2. Reflow soldering should not be done more than two times.
3. When soldering, do not put stress on the LEDs during heating.
4. After soldering, do not warp the circuit board.
5. Recommended soldering conditions:

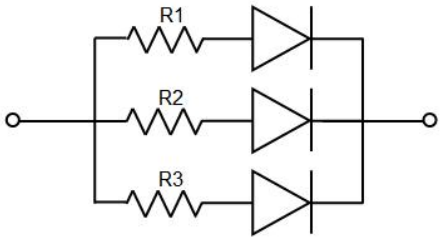
Reflow soldering		Soldering iron	
Pre-heat	150~200°C	Temperature	300°C Max.
Pre-heat time	120 sec. Max.	Soldering time	3 sec. Max.
Peak temperature	260°C Max.		(one time only)
Soldering time	10 sec. Max.(Max. two times)		

Part No.: JSL-3528RGBC-6P

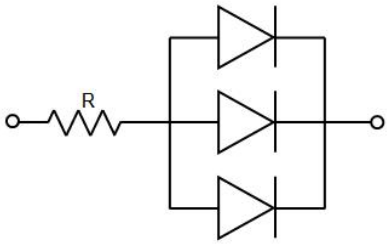
Cautions:

Application

1. A LED is a current-operated device. The slight shift of voltage will cause big change of current, which will damage LEDs. Customer should use resistors in series for the Over-Current-Proof.
2. In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended to use individual resistor separately, as shown in Circuit A below. The brightness of each LED shown in Circuit B might appear difference due to the differences in the I-V characteristics of those LEDs.



Circuit model A



Circuit model B

3. High temperature may reduce LEDs' intensity and other performances, so keeping it away from heat source to get good performance is necessary.

Storage

1.Before opening original package, it is recommended to store them in the following environment:

Temperature: 5℃~30℃ Humidity: 85%RH max.

2. After opening original package, the storage ambient for the LEDs should be in 5~30°C temperature and 60% or less relative humidity.
3. In order to avoid moisture absorption, it is recommended that the LEDs that out of the original package should be stored in a sealed container with appropriate desiccant, or in desiccators with nitrogen ambient.
4. The LEDs should be used within 168hrs (7 days) after opening the package. Once been mounted, soldering should be quick.
5. If the moisture absorbent material (silica gel) has faded away or the LEDs stored out of original package for more than 168hrs (7 days), baking treatment should be performed using the conditions: 60℃ at least 24 hours.

ESD (Electrostatic Discharge)-Protection

A LED (especially the Blue、White and Green product) is an ESD sensitive component, and static electricity or power surge will damage the LED. ESD-damaged LEDs will exhibit abnormal characteristics such as high reverse leakage current, low forward voltage, or “no light-up” at low currents, etc.

Some advice as below should be noticed:

1. A conductive wrist strap or anti-electrostatic glove should be worn when handling these LEDs.
2. All devices, equipment, machinery, work tables and storage racks, etc. must be properly grounded.
3. Use anti-static package or boxes to carry and storage LEDs. And ordinary plastic package or boxes is forbidden to use.
4. Use ionizer to neutralize the static charge during handling or operating.
5. All surfaces and objects within 1 ft close to LEDs measure less than 100V.

Cleaning

Use alcohol-based cleaning solvents such as IPA (isopropyl alcohol) to clean LEDs if necessary.

Soldering

1. Soldering condition refer to the draft “Soldering Profile Suggested” on page 1.
2. Reflow soldering should not be done more than 2 times.
3. Manual soldering is only suggested on repair and rework. The maximum soldering temperature should not exceed 300°C within 3 sec. And the maximum capacity of soldering iron is 30W in power.
4. During the soldering process, do not touch the lens at high temperature.
5. After soldering, any mechanical force on the lens or any excessive vibration shall not be accepted to apply, also the circuit board shall not be bent as well.

Others

1. The LEDs described here are intended to be used for ordinary electronic equipment (such as office equipment, communication equipment and household applications).Consult CMH’s Sales in advance for the applications in which exceptional reliability is required, particularly when the failure or malfunction of the LEDs may directly jeopardize life or health. (such as in aviation, transportation, traffic control equipment, medical and life support systems and safety devices).
2. The light output from the high luminous intensity LEDs may cause injury to human eyes when viewed directly.
3. The appearance and specifications of the product may be modified for improvement without prior notice.