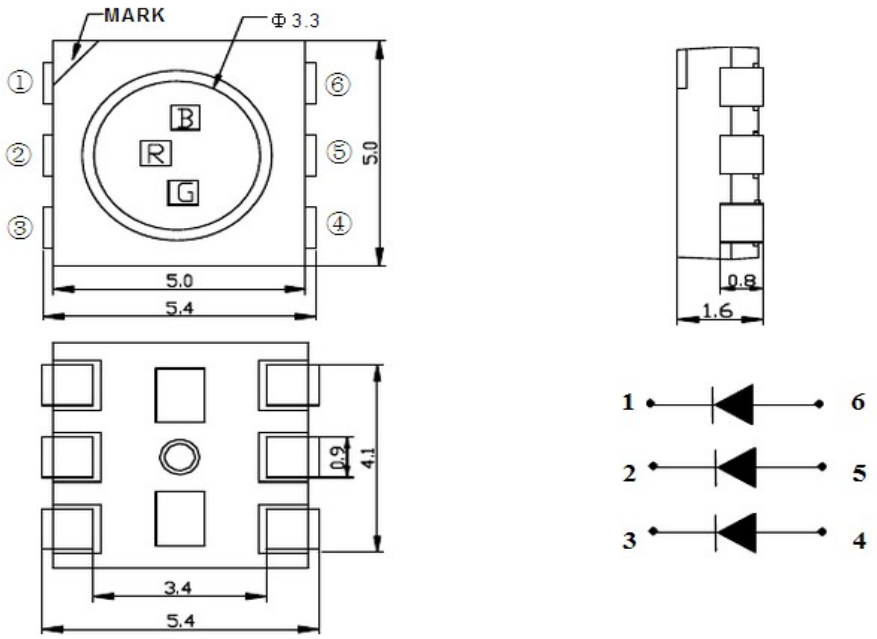
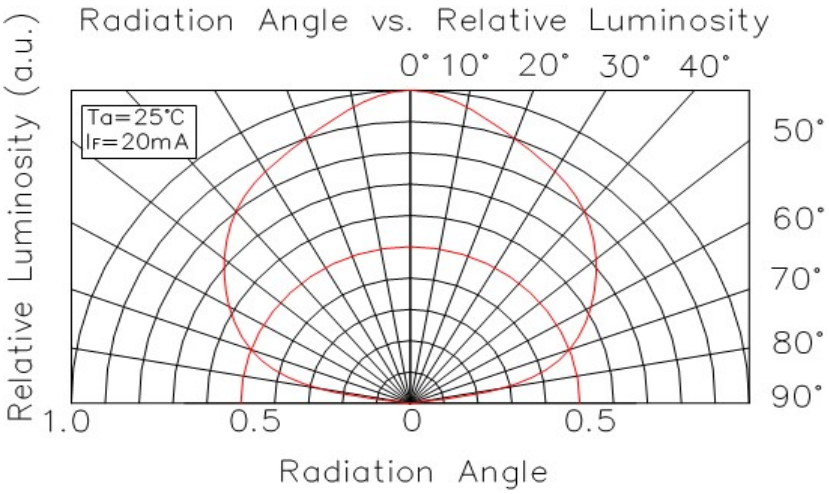
Applications

- Interior automotive lighting(dashboard backlight etc...)
- Optical indicators
- High Tech Lightning
- Security Parts
- Automotive Products
- LCD-Backlight
- Decorative Lighting
- Illuminations
- Mobile Phones
- Light Strips

Package Dimensions Dimension 5,50 x 5,40 x 1,60mm (Tol. +/- 0,10mm)



Rotation Angle vs. Relative Luminosity



Tripple Colour 5050 LED Size

Notes:					Part.No.	M11A6006	
All dimensions in mm tolerance is ±0.1mm unless otherwise noted.					Customer		
DRW:	Harry	CHKD	Dustin	Tolerance	Tolerance:	Date:	17.08.2024
APPD:	Jason	MATL	Wilson	John	MASON	Sheet No.	1 from 8

Absolute Maximum Ratings (Ta = 25°C)

Item-Disription	Symbol	Value	Unit
DC Forward Current	PD	60	mA
Pulse Forward Current	IFP	20	mA
Reverse Voltage:	VR	5	V
Power Dissipation:	PD	200	mW
Operating Voltage	Topr	.-20 ~ +85	°C
Storage Temperature	Tstg	.-30 ~ +80	°C
Lead Soldering Temp.	Tsol	like Page 3	---
Electrostatic Discharge:	ESD	2000	V

Typical Electrical & Optical Characteristics (IF=20mA and Ta = 25°C)

Parameter	Symbol	Condition IF	Min.	Typ.	Max.	Unit
Colour 1						
Luminious Intensity:	Iv	60mA	300		500	mcd
Luminious Intensity:	Iv	60mA				LM
Peak Emission Wave.:	λp	60mA				nm
Domi. Wavelength:	λd	60mA	620		630	nm
DC Forward Voltage:	Vf	60mA	1,90		2,20	V
Colour 2						
Luminious Intensity:	Iv	60mA	1000		1200	mcd
Luminious Intensity:	Iv	60mA				LM
Peak Emission Wave.:	λp	60mA				nm
Domi. Wavelength:	λd	60mA	520		530	nm
DC Forward Voltage:	Vf	60mA	3,00		3,30	V
Colour 3						
Luminious Intensity:	Iv	60mA	300		500	mcd
Luminious Intensity:	Iv	60mA				LM
Peak Emission Wave.:	λp	60mA				nm
Domi. Wavelength:	λd	60mA	460		470	nm
DC Forward Voltage:	Vf	60mA	3,00		3,30	V
Colour 4						
Color Temperature: (White)	K	60mA				Kelvin
Chromaticity (White)	X	60mA				
Coordinates: (White)	Y	60mA				
Luminious Intensity:	Iv	60mA				mcd
Luminious Intensity:	Iv	60mA				LM
Colour 5						
Color Temperature: (White)	K	60mA				Kelvin
Chromaticity (White)	X	60mA				
Coordinates: (White)	Y	60mA				
Luminious Intensity:	Iv	60mA				mcd
Luminious Intensity:	Iv	60mA				LM

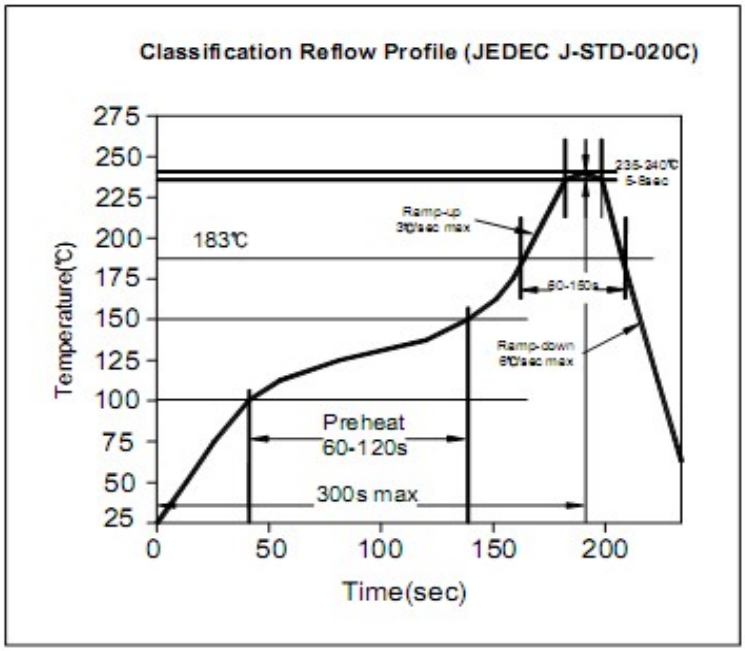
Viewing Angle:	20 1/2	60mA		150		Deg.
50% Power Angle		60mA		30		Deg.
DC Reverse Current:	Ir	Vr=5V			10	µA

Tripple Colour 5050 LED Size

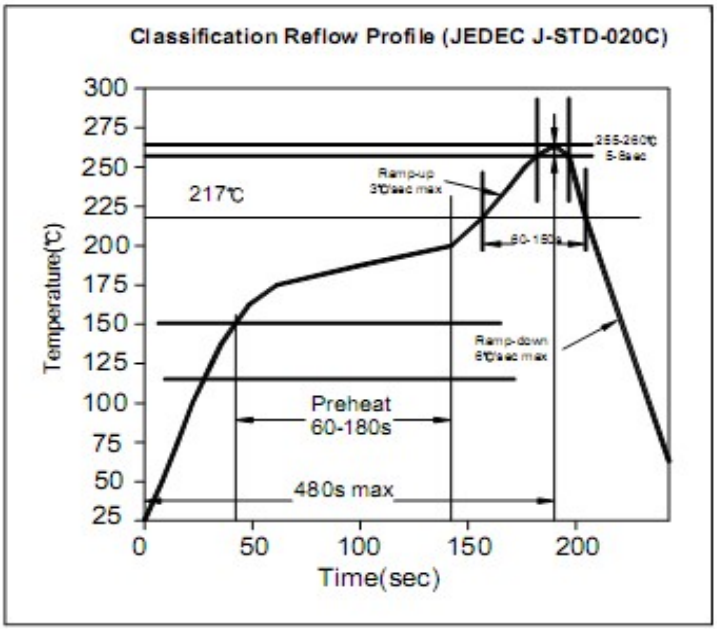
Notes:

1. Tolerance of measurement of luminous intensity			: ±10%	Part.No.	**M11A6006**	
2. Tolerance of measurement of chromatic coordinates			: ±1nm	Customer		
3. Tolerance of measurement of forward voltage			: ±0.1V			
DRW:	Harry	CHKD	Dustin	Tolerance	Tolerance:	Date: 17.08.2024
APPD:	Jason	MATL	Wilson	John	MASON	Sheet No. 2 from 8

Soldering condition for Lead Soldering

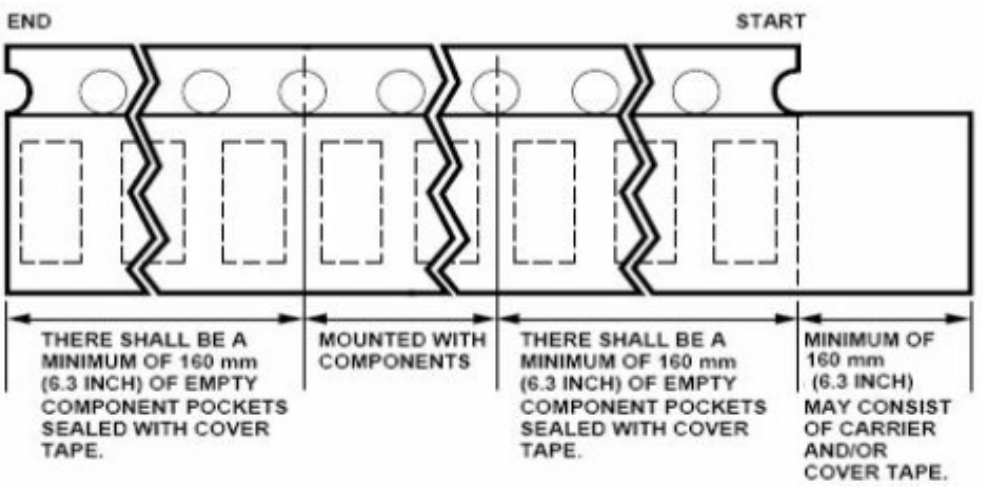


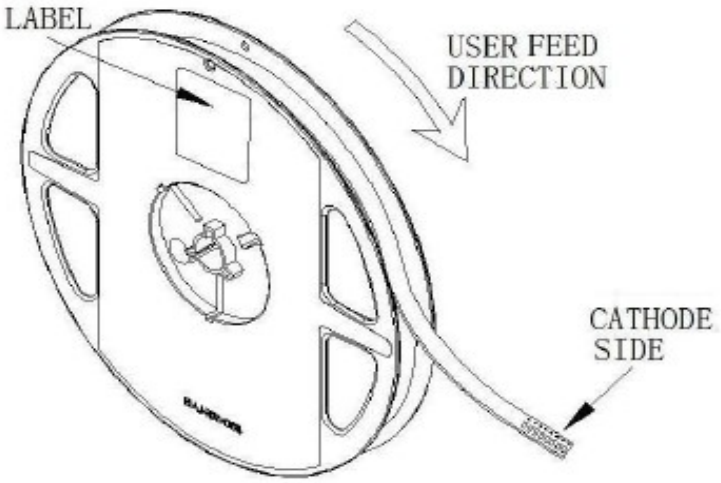
Soldering condition for Lead free Soldering

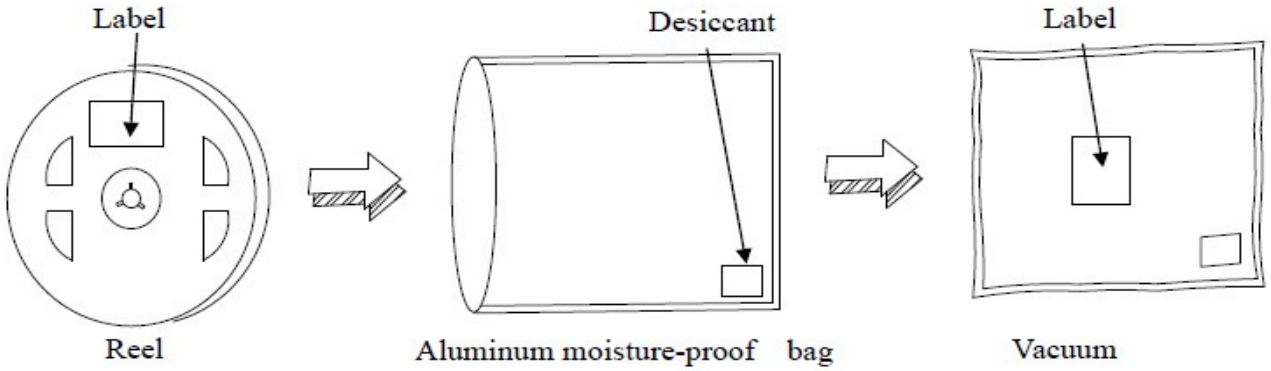


Tripple Colour 5050 LED Size							
					Part.No.	M11A6006	
					Customer		
DRW:	Harry	CHKD	Dustin	Tolerance	Tolerance:	Date:	17.08.2024
APPD:	Jason	MATL	Wilson	John	MASON	Sheet No.	3 from 8

Packing specification (Antistatic Poly Bag) only for Reference



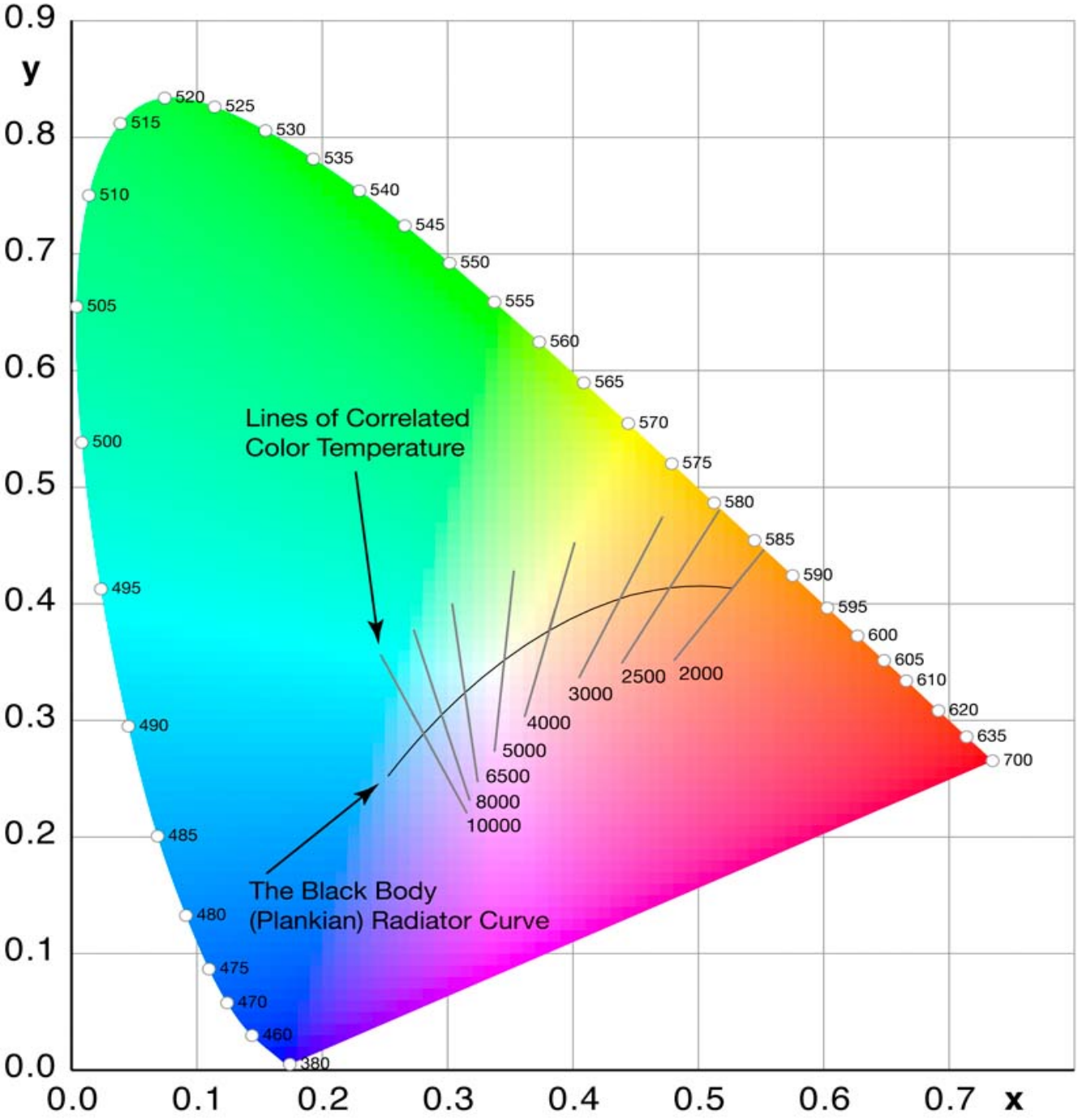




ESD

Quantity of Reel (like Size of LED) other Packing Specifications available					Tripple Colour 5050 LED Size		
					Part.No.	M11A6006	
					Customer		
DRW:	Harry	CHKD	Dustin	Tolerance	Tolerance:	Date:	17.08.2024
APPD:	Jason	MATL	Wilson	John	MASON	Sheet No.	4 from 8

Color table curve



Tripple Colour 5050 LED Size	
Part.No.	**M11A6006**
Customer	

DRW:	Harry	CHKD	Dustin	Tolerance	Tolerance:	Date:	17.08.2024
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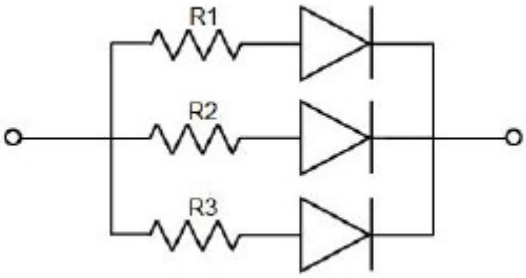
Reliability Test

Classification	Test Item	Test Condition	Reference Standard	Reference Standard
Endurance Test	Opearting Life	Ta= Under Room Temperature As per Data Sheet Maximum Ratings	1000 HRS (-25HRS, +72HRS *@20mA	MIL-STD-750D:1026 MIL-STD-830D:1005 JIS C 7021:-B-1
	Hight Temperature High Humidity Storage	IR-Reflow In Board, 2 Times ta=85+/- 5°C, RH=85%	1000HRS +/- 2HRS	JESD22-A101
	High Temperature Storage	Ta=105 +/- 5°C	1000 HRS (-25HRS, +72HRS *@20mA	MIL-STD-830D:1008 JIS C 7021:-B-10
	Low Temperature Storage	Ta=105 +/- 5°C	1000 HRS (-25HRS, +72HRS *@20mA	JIS C 7021:-B-12
Environmental Test	Temperature Cycling	105°C ~25°C ~ 55°C ~ 25°C 30min 5mins 30mins 5mins	10 Cycles	MIL-STD-202F:107D MIL-STD-202F:107D MIL-STD-883D:1010 MIL-STD-202F:107D
	Thermal Shock	IR-Reflow In Board, 2 Times ta=85+/- 5°C ~ -40°C +/- 5°C 10mins 10mins	10 Cycles	MIL-STD-202F:107D MIL-STD-750D:1051 MIL-STD-883D:1011
	Solder Resistance	T.sol= 260°C +/- 5°C	10 +/- 1secs	MIL-STD-202F:210A MIL-STD-750D:2031 JIS C 7021:A-1
	IR-Reflow Normal Pricess	Ramp-up rate (217°C to Peak +3°c second max. Temp.maintain at 125 (+25)°C 120secounds max. Temp.maintain above 183°C 60~150secounds Peak Temperature Range 235°C +5/-0°C Time within 5°C of actual Peak Temperature (tp) 10~30secounds Ramp-down Rate +6°C secound max.		MIL-STD-750D:2031.2 J-STD-020C
	IR-Reflow Pb Free Process	Ramp-up rate (217°C to Peak +3°c second max. Temp.maintain at 175 (+25)°C 180secounds max. Temp.maintain above 217°C 60~150secounds Peak Temperature Range 260°C +5/-0°C Time within 5°C of actual Peak Temperature (tp) 20~40secounds Ramp-down Rate +6°C secound max.		MIL-STD-750D:2031.2 J-STD-020C
	Solderability	T.sol= 235 +/- 5°C Immersion rate 25+/- 2.5mm/sec Coverage ≥95% of dipped Surface	Immersion time 2+/- 0,5 sec	MIL-STD-202F:208D MIL-STD-750D:2026 MIL-STD-883D:2003 IEC 68 Part 2-20 JIS C 7021-A-2

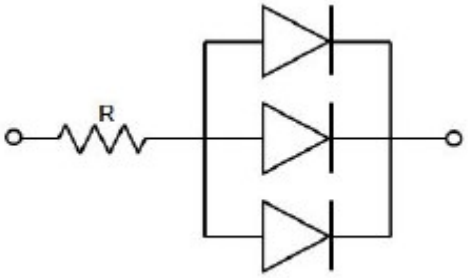
Tripple Colour 5050 LED Size	
Part.No.	**M11A6006**
Customer	

DRW:	Harry	CHKD	Dustin	Tolerance	Tolerance:	Date:	17.08.2024
APPD:	Jason	MATL	Wilson	John	MASON	Sheet No.	6 from 6

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

1. Temperature: 5℃~30℃；Humidity: 85%RH max. When the inventory over 2 months,Should be done before treatment using dehumidification, Temperature: 60℃/8 hours.
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 48hrs (2 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 48hrs (2 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. （Grounding impedance value within 10Ω）
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.

Tripple Colour 5050 LED Size							
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APPD:	Jason	MATL	Wilson	John	MASON	Sheet No.	7 from 8

Cleaning

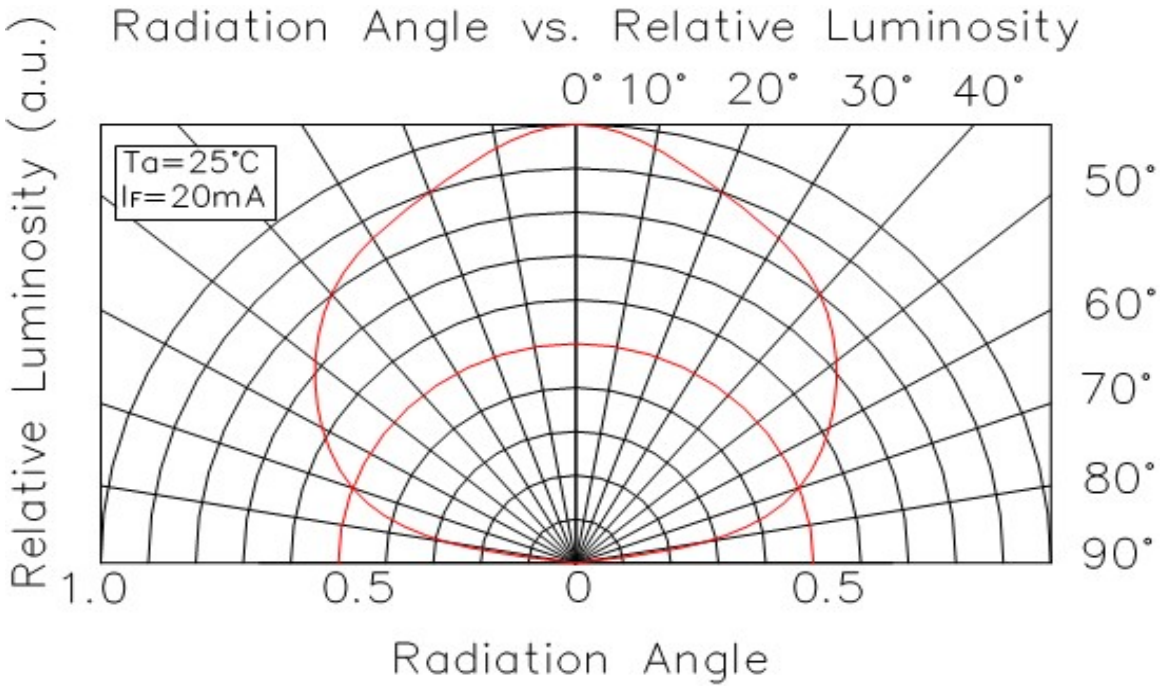
Use alcohol-based cleaning solvents such as IPA (isopropyl alcohol) to clean LEDs if necessary.

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 RigDoo’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.
4. LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating



Tripple Colour 5050 LED Size							
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