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SPECIFICATION

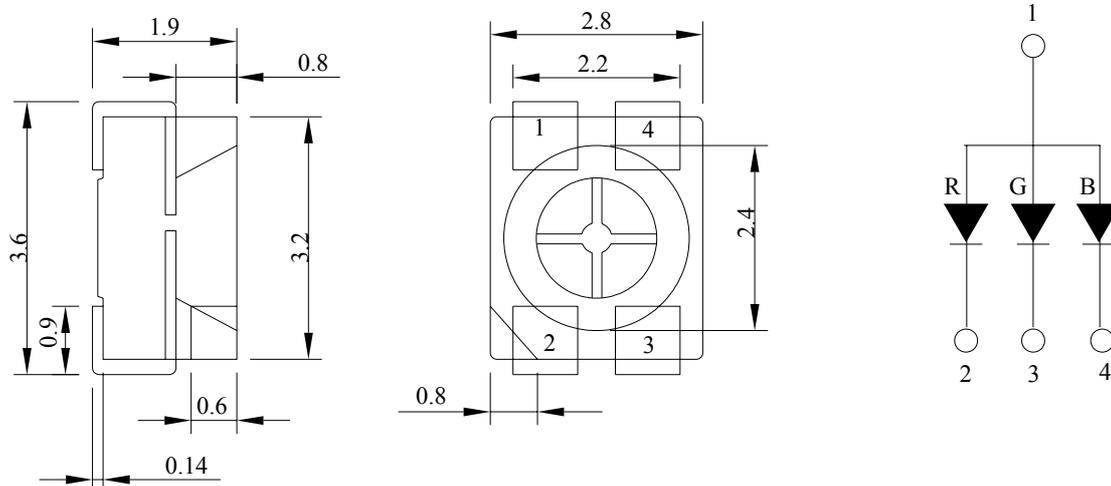
PART NO. : LT5K63-AB-RGB-SQB

3.2 x 2.8mm SMD TYPE



Approved by	Checked by	Prepared by
<i>Kj</i>	<i>Lian</i>	<i>Jie</i>

Package Dimensions



Notes:

1. All dimensions are in mm.
2. Tolerance is ± 0.25 mm unless otherwise noted.

Description

Part No.	LED Chip		Lens Color
	Material	Emitting Color	
LT5K63-AB-RGB-SQB	AlGaInP/Sapphire	Hyper Red	Water Clear
	InGaN/Sapphire	True Green	
	InGaN/Sapphire	Blue	

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	PD	75	mW
Reverse Voltage	VR	5	V
D.C. Forward Current	If	30	mA
Peak Current(1/10Duty Cycle Pulse Width.)	If(Peak)	100	mA
Operating Temperature Range	Topr.	-40 to +100	°C
Storage Temperature Range	Tstg.	-40 to +100	°C
Soldering Temperature	Tsld.	Reflow Soldering: 260°C for 10 sec. Hand Soldering: 350°C for 3 sec.	
Electric Static Discharge Threshold (HBM)	ESD	1000	V

Electrical and Optical Characteristics:

Hyper Red

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	370	680		mcd
Forward Voltage	Vf	If=20mA		2.1	2.5	V
Peak Wavelength	λ_p	If=20mA		632		nm
Dominant Wavelength	λ_d	If=20mA		625		nm
Reverse Current	Ir	VR=5V			100	μ A
Viewing Angle	2θ 1/2	If=20mA		120		deg
Spectrum Line Halfwidth	$\Delta\lambda$	If=20mA		20		nm

- Notes:1. Tolerance of Luminous Intensity is $\pm 15\%$
2. Tolerance of Forward Voltage is $\pm 0.1V$
3. Tolerance of Dominant Wavelength is $\pm 1nm$
4. Customer's special requirements are also welcome.

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	P _D	120	mW
Reverse Voltage	V _R	5	V
D.C. Forward Current	I _f	30	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	I _f (Peak)	100	mA
Operating Temperature Range	Topr.	-40 to +100	°C
Storage Temperature Range	Tstg.	-40 to +100	°C
Soldering Temperature	Tsld.	Reflow Soldering: 260°C for 10 sec. Hand Soldering: 350°C for 3 sec.	
Electric Static Discharge Threshold (HBM)	ESD	1000	V

Electrical and Optical Characteristics:

True Green

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	I _v	I _f =20mA	700	1200		mcd
Forward Voltage	V _f	I _f =20mA		3.2	4.0	V
Peak Wavelength	λ _p	I _f =20mA		--		nm
Dominant Wavelength	λ _d	I _f =20mA		525		nm
Reverse Current	I _r	V _r =5V			50	μA
Viewing Angle	2θ 1/2	I _f =20mA		120		deg
Spectrum Line Halfwidth	Δλ	I _f =20mA		35		nm

- Notes: 1. Tolerance of Luminous Intensity is ±15%
2. Tolerance of Forward Voltage is ±0.1V
3. Tolerance of Dominant Wavelength is ±1nm
4. Customer's special requirements are also welcome.

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	P _D	120	mW
Reverse Voltage	V _R	5	V
D.C. Forward Current	I _f	30	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	I _f (Peak)	100	mA
Operating Temperature Range	T _{opr.}	-40 to +100	°C
Storage Temperature Range	T _{stg.}	-40 to +100	°C
Soldering Temperature	T _{sl.}	Reflow Soldering: 260°C for 10 sec. Hand Soldering: 350°C for 3 sec.	
Electric Static Discharge Threshold (HBM)	ESD	1000	V

Electrical and Optical Characteristics:

Blue

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	I _v	I _f =20mA	150	290		mcd
Forward Voltage	V _f	I _f =20mA		3.2	4.0	V
Peak Wavelength	λ _p	I _f =20mA		----		nm
Dominant Wavelength	λ _d	I _f =20mA		465		nm
Reverse Current	I _r	V _r =5V			50	μA
Viewing Angle	2θ 1/2	I _f =20mA		120		deg
Spectrum Line Halfwidth	Δλ	I _f =20mA		26		nm

Notes:1. Tolerance of Luminous Intensity is ±15%

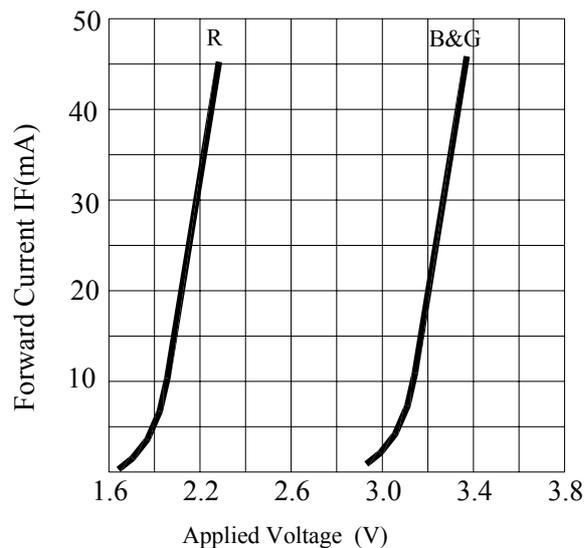
2. Tolerance of Forward Voltage is ±0.1V

3. Tolerance of Dominant Wavelength is ±1nm

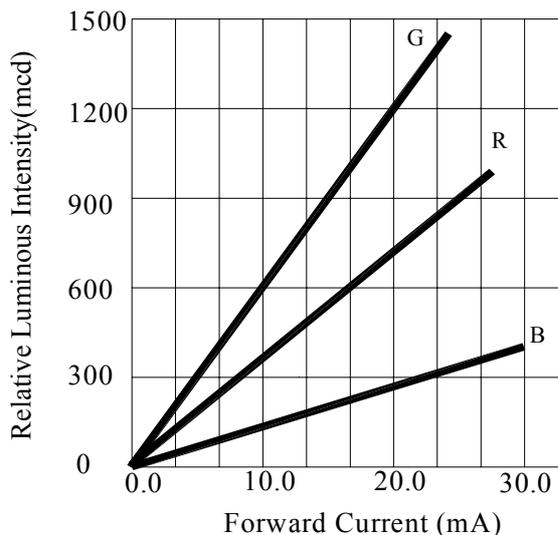
4. Customer's special requirements are also welcome.

Typical Electrical/Optical Characteristic Curves

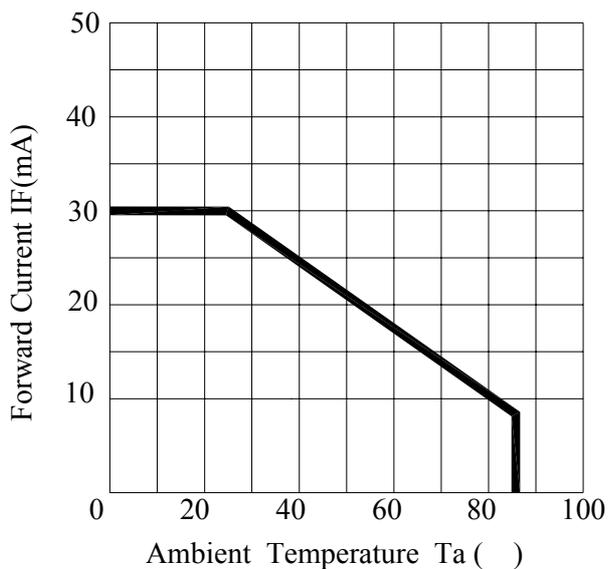
(25°C Ambient Temperature Unless Otherwise Noted)



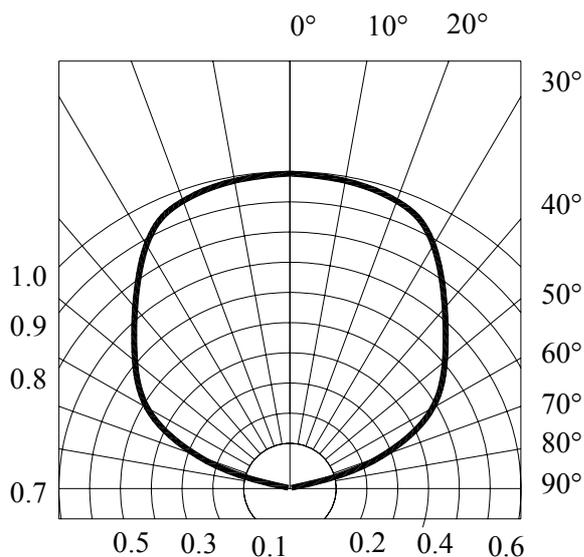
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

PRECAUTION IN USE

Storage

Recommended storage environment

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Moisture measures: Please refer to Moisture-sensitive label on reels package bags.

If unused LEDs remain, they should be stored in moisture proof packages, such as sealed container with packages of moisture absorbent material (silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

Fold the opened bag firmly and keep in dry environment.

Soldering

	Reflow Soldering		Hand Soldering	
	Lead Solder	Lead – free Solder		
Pre-heat	120~150°C	180~200°C	Temperature	350°C Max.
Pre-heat time	120sec. Max.	120sec. Max.	Soldering time	3sec. Max. (one time only)
Peak temperature	240°C Max.	260°C Max.		
Soldering time	10sec. Max.	10sec. Max.		
Condition	refer to Temperature- profile 1	refer to Temperature- profile 2		

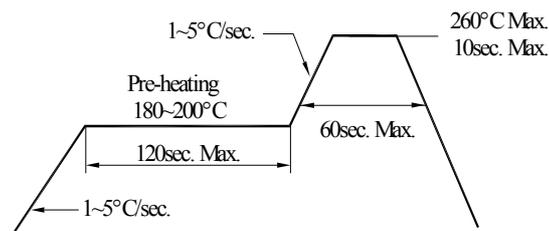
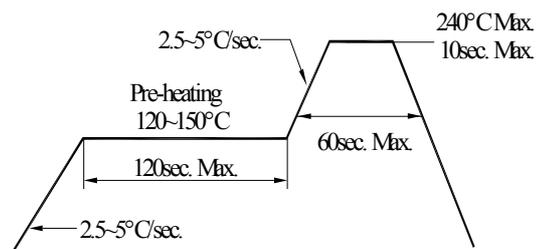
*After reflow soldering rapid cooling should be avoided.

[Temperature-profile (Surface of circuit board)]

Use the conditions shown to the under figure.

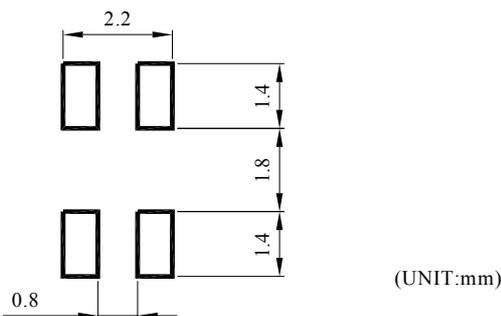
< 1 : Lead Solder >

< 2 : Lead-free Solder >



[Recommended soldering pad design]

Use the following conditions shown in the figure.



Handling of Silicone Resin LEDs

Handling Indications

During processing, mechanical stress on the surface should be minimized as much as possible. Sharp objects of all types should not be used to pierce the sealing compound

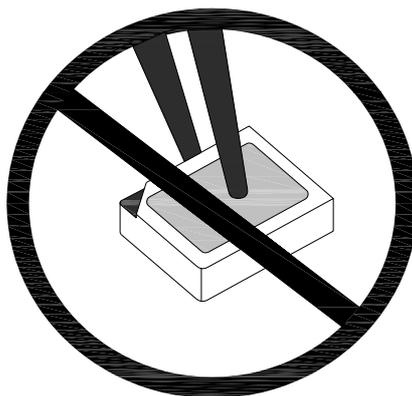


Figure 1

In general, LEDs should only be handled from the side. By the way, this also applies to LEDs without a silicone sealant, since the surface can also become scratched.

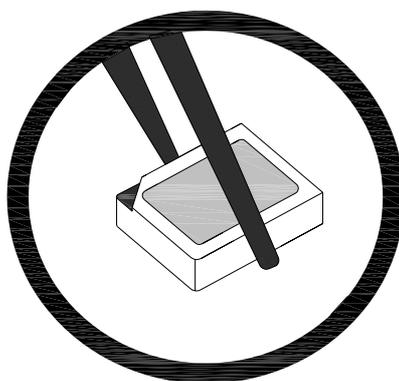
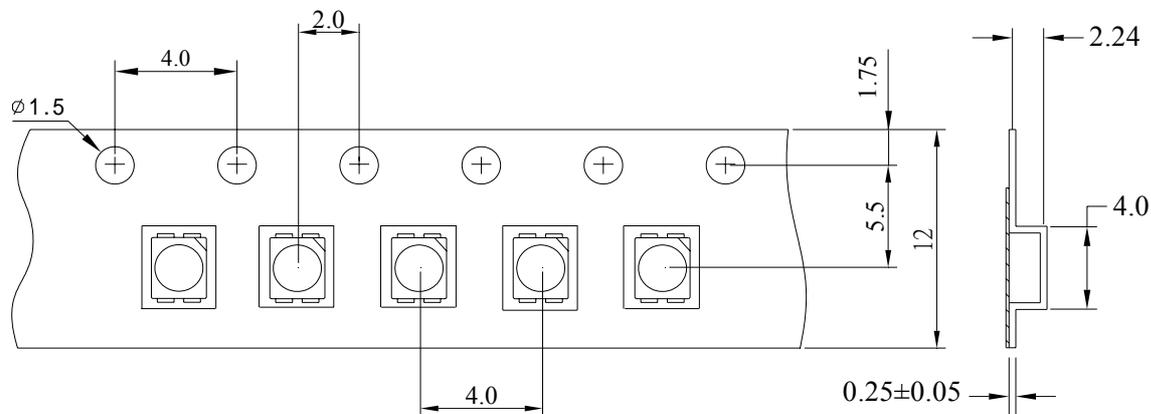


Figure 2

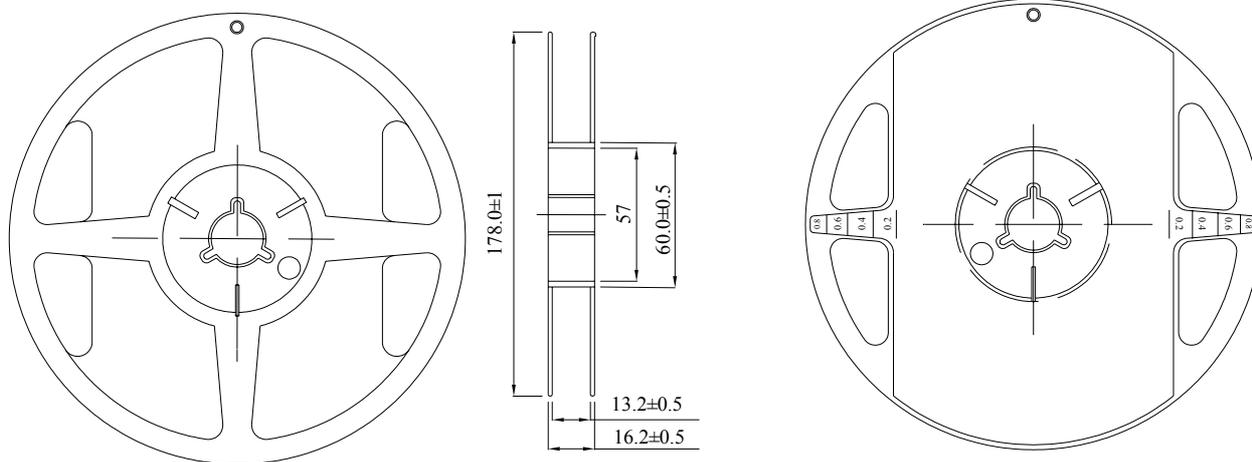
When populating boards in SMT production, there are basically no restrictions regarding the form of the pick and place nozzle, except that mechanical pressure on the surface of the resin must be prevented.

This is assured by choosing a pick and place nozzle which is larger than the LED's reflector area.

Dimensions for Tape



Dimensions for Reel



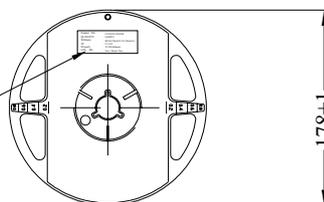
Notes:

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

Packing

REEL
QUANTITY: 2,000 PCS

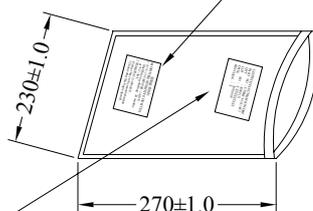
LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



溼氣敏感材料
MOISTURE SENSITIVE DEVICES
1. 在5°C-30°C密封貯藏，1年有效。
Shelf life in sealed bag : 12 months
at 5°C-30°C .
2. 開封後需在168小時內使用。
Devices have to be mounted within
168 hours after this bag is opened .

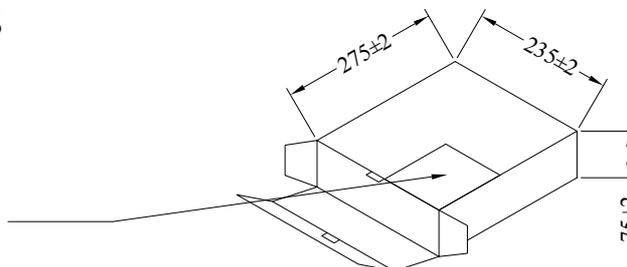
BAG
QUANTITY: 2,000 PCS

LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



INSIDE BOX
QUANTITY: 4 BAGS
TOTAL: 8,000 PCS

LEDTECH ELECTRONICS CORP.
PART NO :LTXXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



Notes:

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