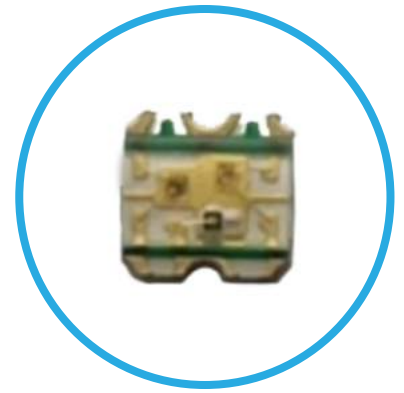


VAOL_S19337R6GHBH

Full Color PCB Type SMD LED



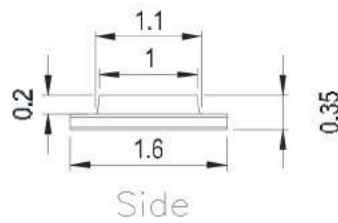
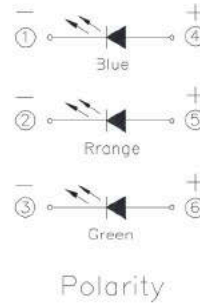
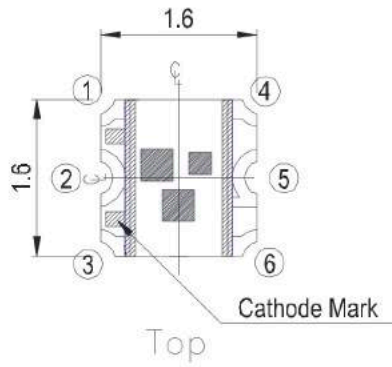
Application

- Wearable and Portable Devices
- Automotive Features
- Navigations Systems
- Home and Smart Appliance
- Backlit Keypads
- Medical Devices
- Health Care Application
- Industrial Control Systems
- Status Indicator

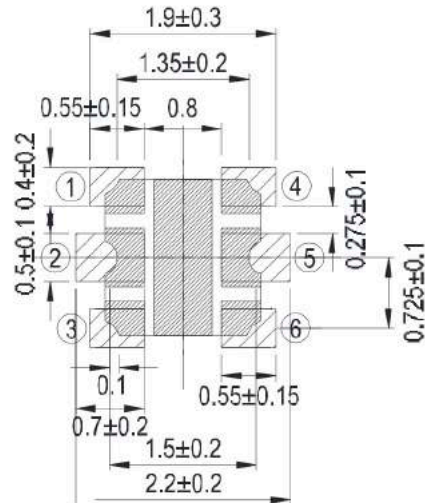
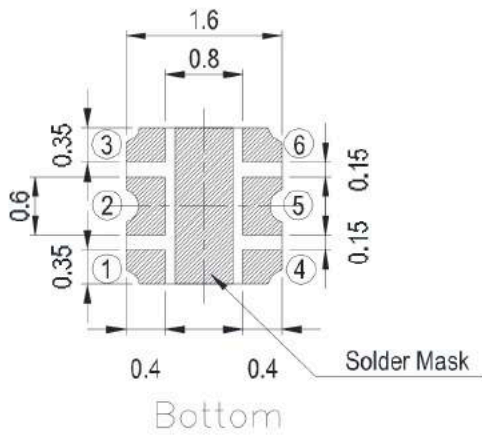
Key Features

- Package in 8mm tape on a “ 7 “ diameter reel
- The SMD LED is much smaller than lead frame type components, thus enable smaller board size, higher packing density and reduced storage space and finally smaller equipment to be obtained
- Light weight makes them ideal for miniature applications
- Compatible with automatic placement equipment
- Compatible with infrared and vapor phase reflow solder process
- Multi-ColorType
- Pb-Free
- RoHS compliant version

Product Dimensions



Recommend soldering pad



Notes:

1. All dimensions are in millimeters
2. Tolerance is ± 0.1 mm unless otherwise noted
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

Product Specifications

Selection Guide

Chip			Lens Color
Type	Material	Emitted Color	
R	AlTnGaN	Brilliant Red	Water Clear
G	InGaN	Brilliant Green	
B	InGaN	Blue	

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	R6:25 GH:25 BH:25	mA
Operating Temperature	T_{OPR}	-40 ~+85	°C
Storage Temperature	T_{STG}	-40 ~+90	°C
Soldering Temperature	T_{SOL}	260 (for 5 seconds)	°C
Electrostatic Discharge	ESD	R6:2000 GH:150 BH:150	V
Power Dissipation	P_d	R6:60 GH:110 BH:110	mW
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	R6:60 GH:100 BH:100	mA

Notes:

1. Specific binning requirements- contact VCC

Product Specifications

Electrical/Optical Characteristics and Curves (Ta=25°C)

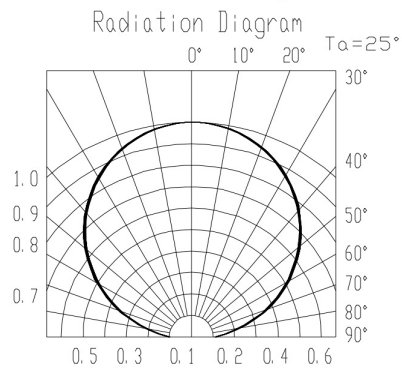
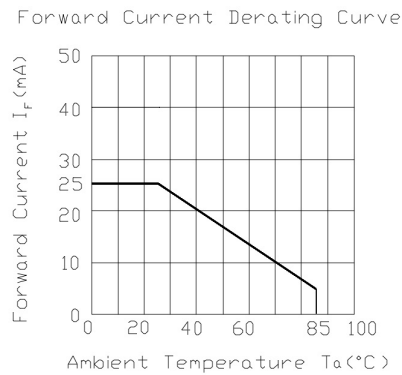
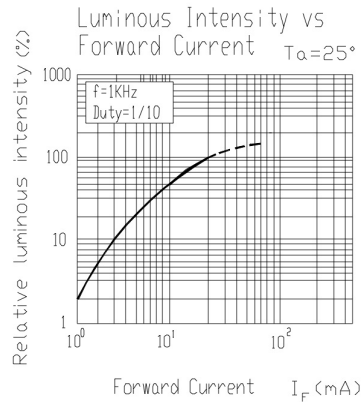
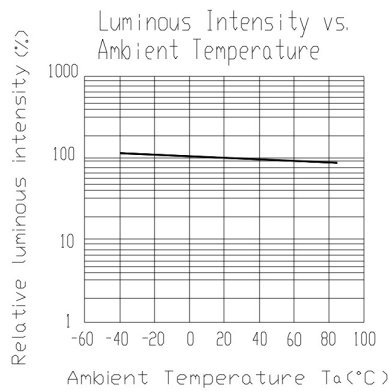
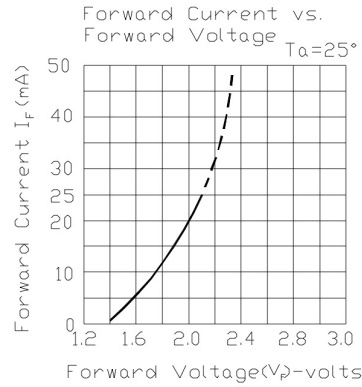
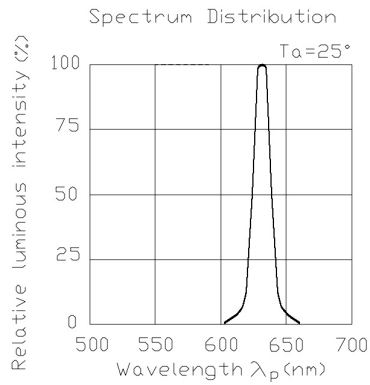
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	R6	72	100		mcd	IF=20mA
	I _V GH	112	180	----		
	BH	28.5	50			
Viewing Angle	2Θ _{1/2}	----	120	----	deg.	
Peak wavelength	R6		632		nm	
	λ _p GH	----	518	----		
	BH		468			
Dominant Wavelength	R6		624		nm	
	λ _d GH	----	525	----		
	BH		470			
Spectrum Radiation Bandwidth	Δ		20		nm	
	λ	----	35	----		
			35			
Forward Voltage	R6		2.0	2.4	V	
	V _F GH	----	3.3	3.9		
	BH		3.9	3.9		
Reverse Current	R6			10	μA	VR=5V
	I _R GH	----	----	50		
	BH			50		

Notes:

1. Tolerance of Luminous Intensity ±10%
2. Tolerance of Dominant Wavelength ±1nm
3. Tolerance of Forward Voltage ±0.1V

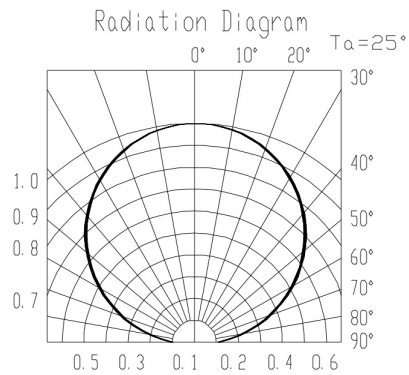
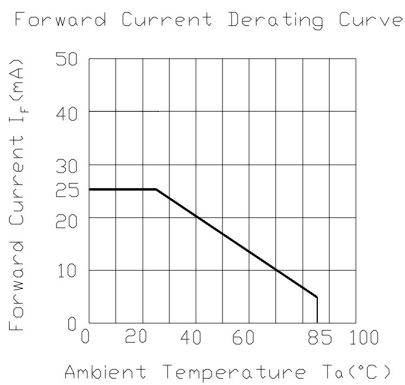
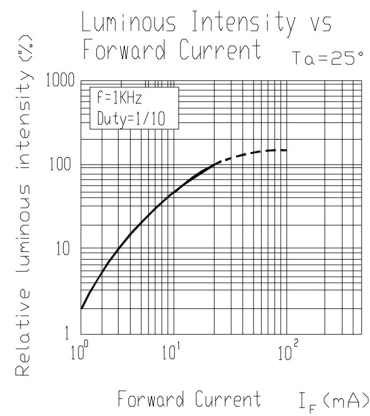
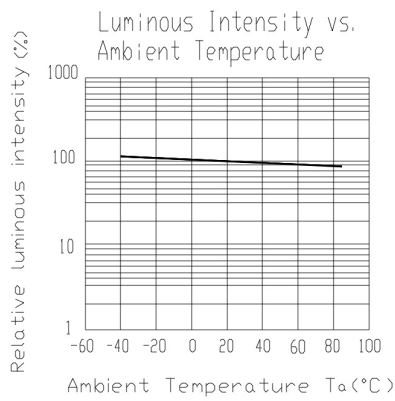
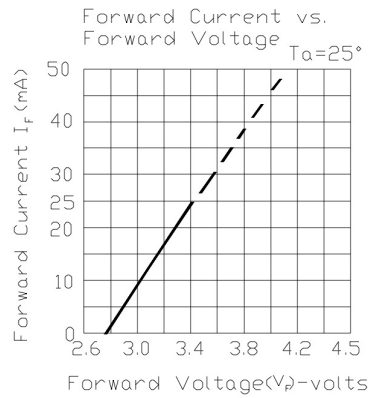
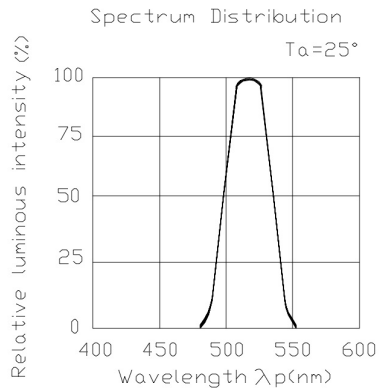
Product Specifications

Typical Electro-optical Characteristics Curves R6



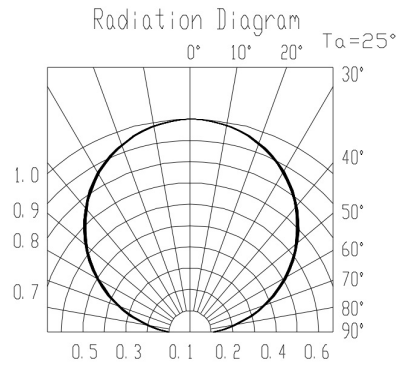
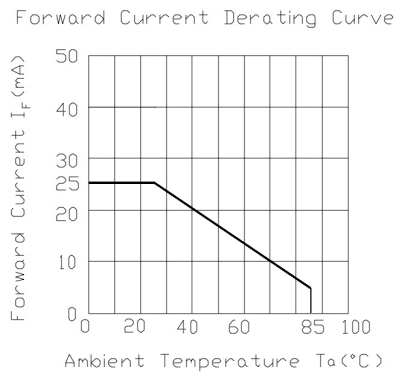
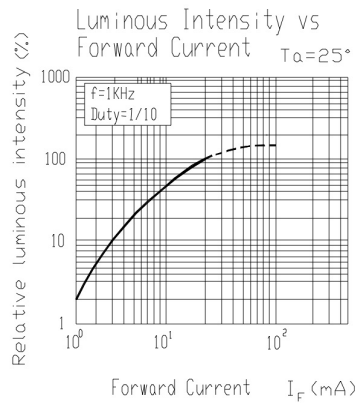
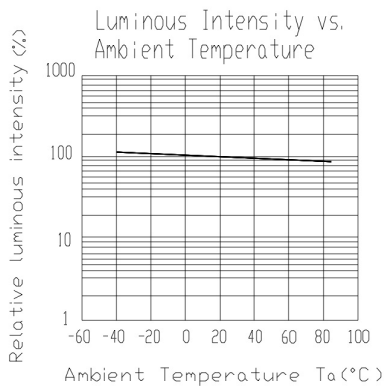
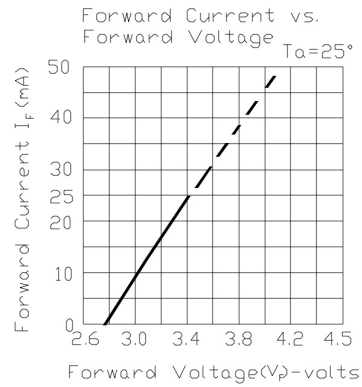
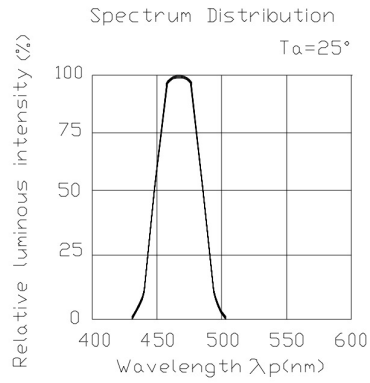
Product Specifications

Typical Electro-optical Characteristics Curves GH



Product Specifications

Typical Electro-optical Characteristics Curves BH



Reliability Test Items and Conditions

The reliability of products shall be satisfied with items listed below. Confidence level : 90% LTPD: 10%

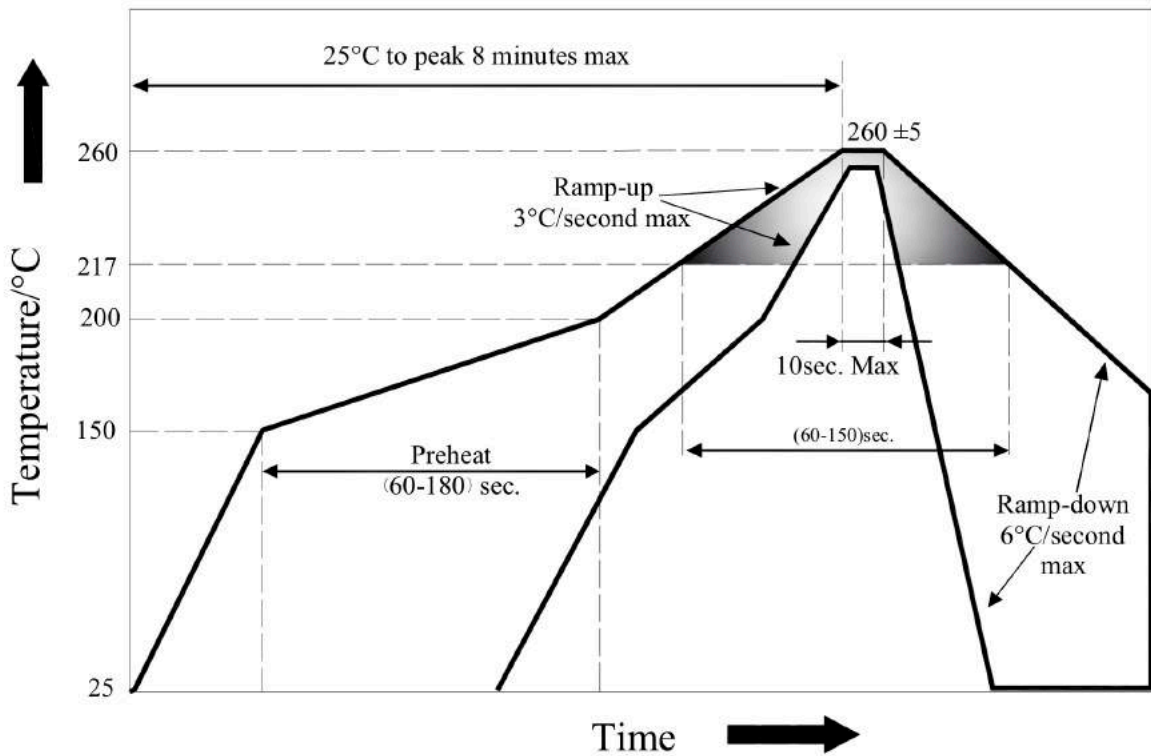
No.	items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp.: 260C \pm 5°C 5sec.	6Min.	22 PCS.	0/1
2	Temperature Cycle	H:+100°C 15min \int 5 min L:-40°C 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H:+100°C 5min \int 10 sec L: -10°C 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp.: 100°C	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40°C	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	IF = 20mA	1000 Hrs.	22 PCS.	0/1
7	High Temperature/High Humidity	85°C/85%RH	1000 Hrs.	22 PCS.	0/1

Precautions for Use

1. Customer must apply resistors for protection , otherwise slight a voltage shift will cause a big current change.
2. Storage
 - 2.1 Do not open moisture proof bag before the products are ready to use.
 - 2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.
 - 2.3 The LEDs should be used within a year.
 - 2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.
 - 2.5 The LEDs should be used within 168 hours (7 days) after opening the package.
 - 2.6 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
Baking treatment : 60 \pm 5°C for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 When soldering, do not put stress on the LEDs during heating.

3.3 Reflow soldering should not be done more than two times.

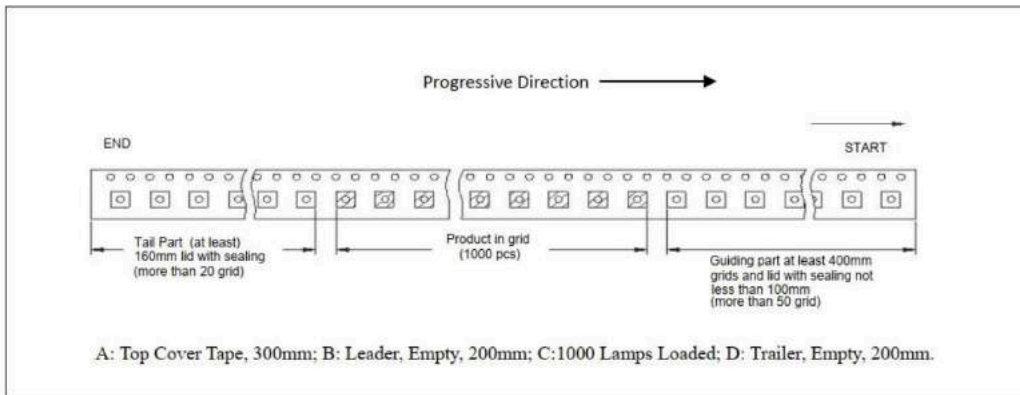
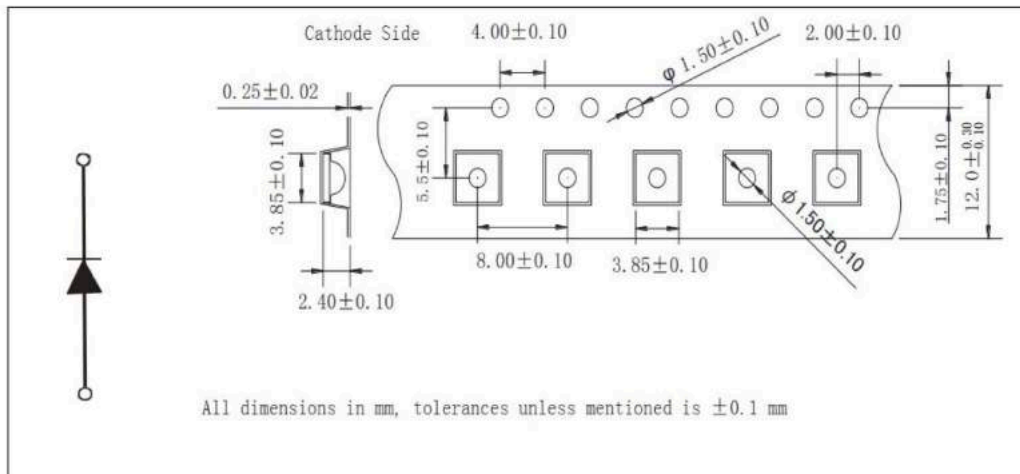
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

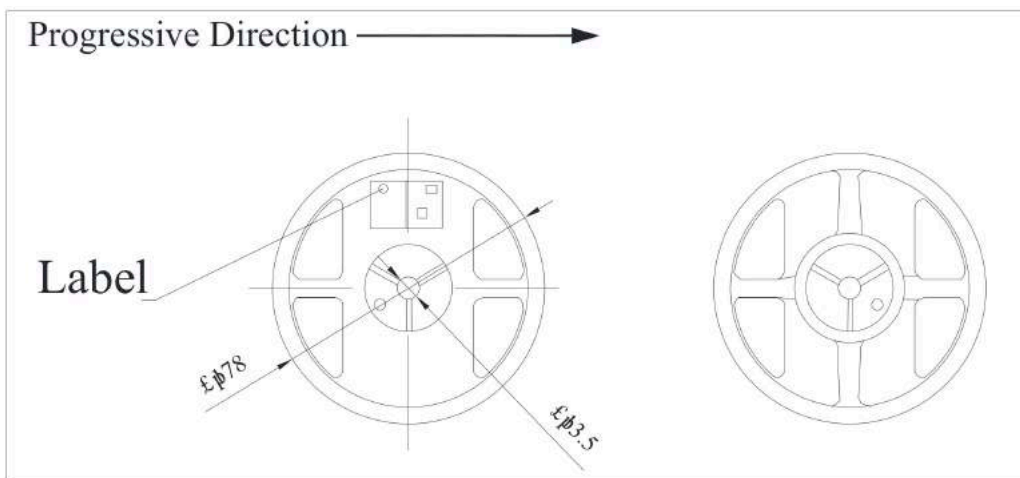
Each terminal is to go to the tip of soldering iron temperature less than 280°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

Package Dimensions

Details of Carrier Tape

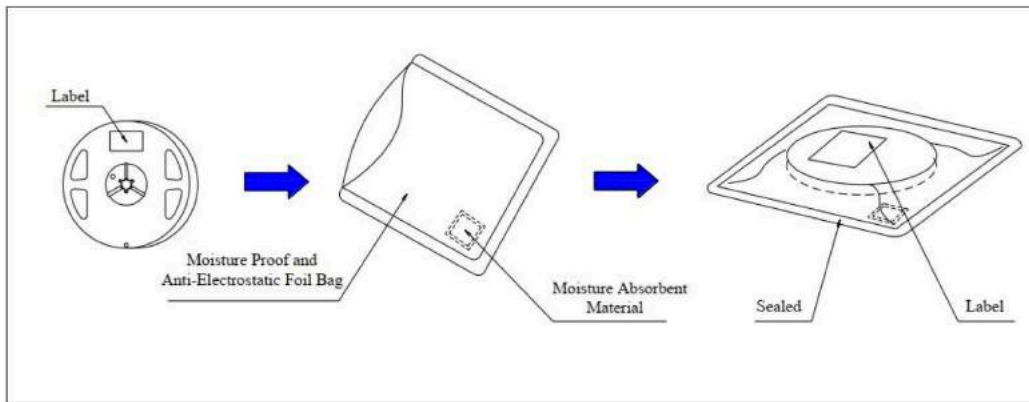


Reel Dimension



Package Dimensions

Moisture Proof and Anti-Electrostatic Foil Bag



Compliances and Approvals

RoHS
COMPLIANT