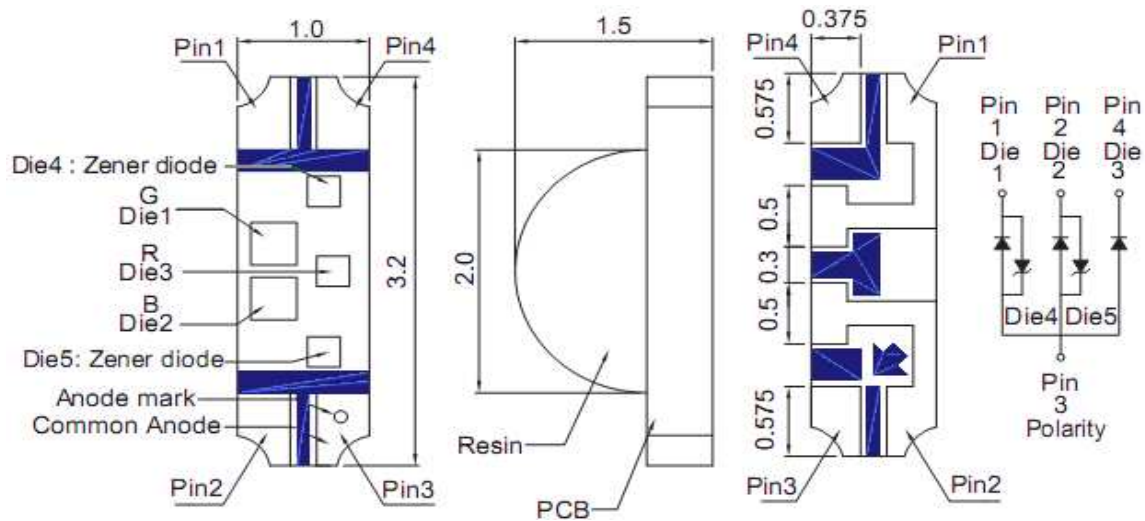




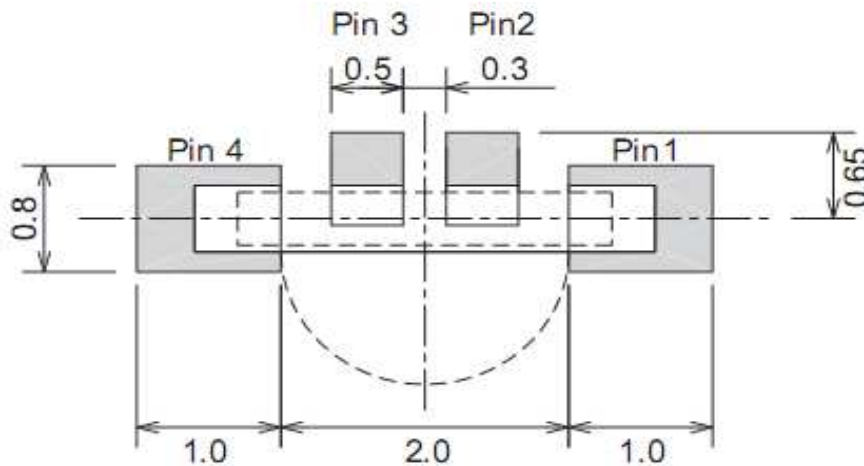
Applications

- Interior automotive lighting
- Optical indicators
- Communication Products
- Backlighting
- Toys

Technical Drawing



Recommended Soldering Pattern



Notes :

All dimensions in mm tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.

SMT Top View LED			
Amber	Green	Blue	
Part No.:			M11M1002
Customer:			

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Absolute Maximum Ratings

Ta=25°C

Item	Symbol	AllnGaP	InGaN	Unit
Power Dissipation	P _D	72	78	mW
DC Forward Current	I _F	30	20	mA
Pulsed Forward Current	I _{FP} *	100	80	mA
Reverse Voltage	V _R	5		V
Operating Temperature	T _{OP}	-30 to 80		°C
Storage Temperature	T _{ST}	-40 to 85		°C

* 0.1 msec pulse, 10% duty cycle

Electrcal / Optical Characteristics

I_F=20mA Ta=25°C

Emitting Color Material	Amber		Green	Blue	
	AllnGaP		InGaN	InGaN	
Forward Voltage	typ.	1.9	3.3	3.3	V _F
	max.	2.4	3.9	3.9	V _F
Wavelength typ.	λ _D	605	527	470	nm
	λ _P	609	520	468	nm
	Δλ	17	40	40	nm
Color Temperature	min.	---	---	---	K
	max.	---	---	---	K
Luminous Intensity *	min.	90	90	56	mcd
	typ.	140	200	90	mcd
Reverse Current	max.	---			μA
Viewing Angle	2Θ1/2		140		

* Per NIST standards

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Directive Characteristics

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Curvs

Forward Current vs. Forward Voltage

Forward Intensity vs. Forward Voltage

Forward Current (mA)

Forward Intensity (%)

Forward Voltage (V_F)

Forward Voltage (V_F)

Forward Current vs. Forward Voltage

Forward Current (mA)

Forward Voltage (V_F)

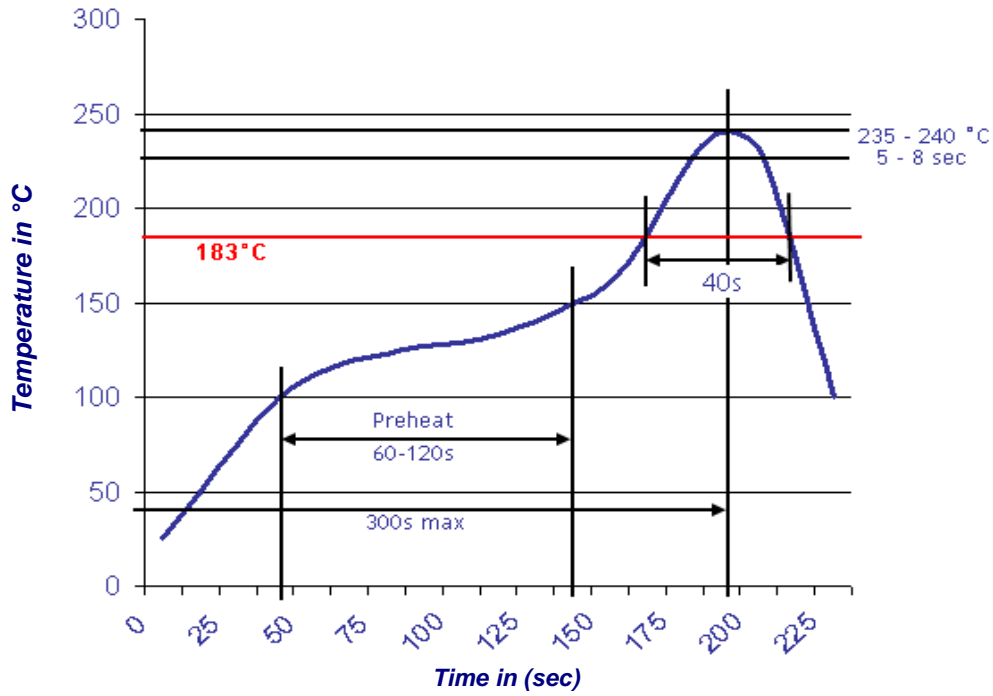
SMT Top View LED							
Amber	Green	Blue					
Part No.:			M11M1002				
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Solder Condition

Lead Free Solder

Classification Reflow Profile (JEDEC J-STD-020C)

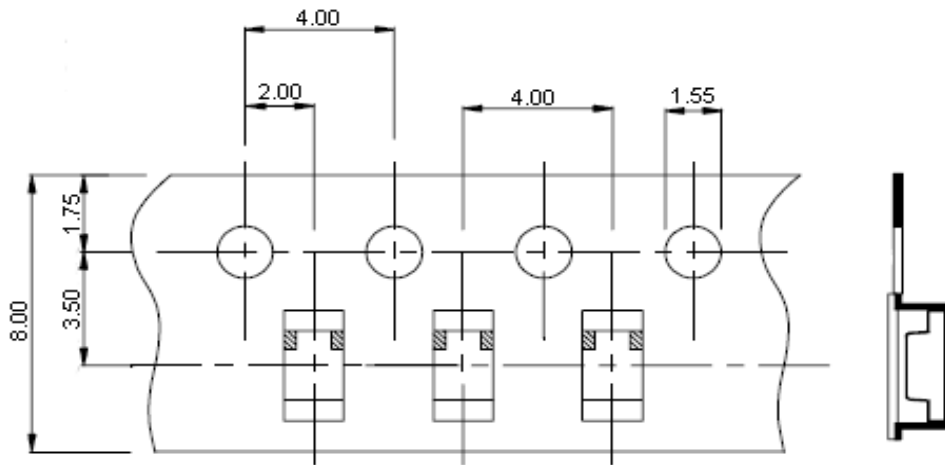


SMT Top View LED			
Amber	Green	Blue	
Part No.:			M11M1002
Customer:			

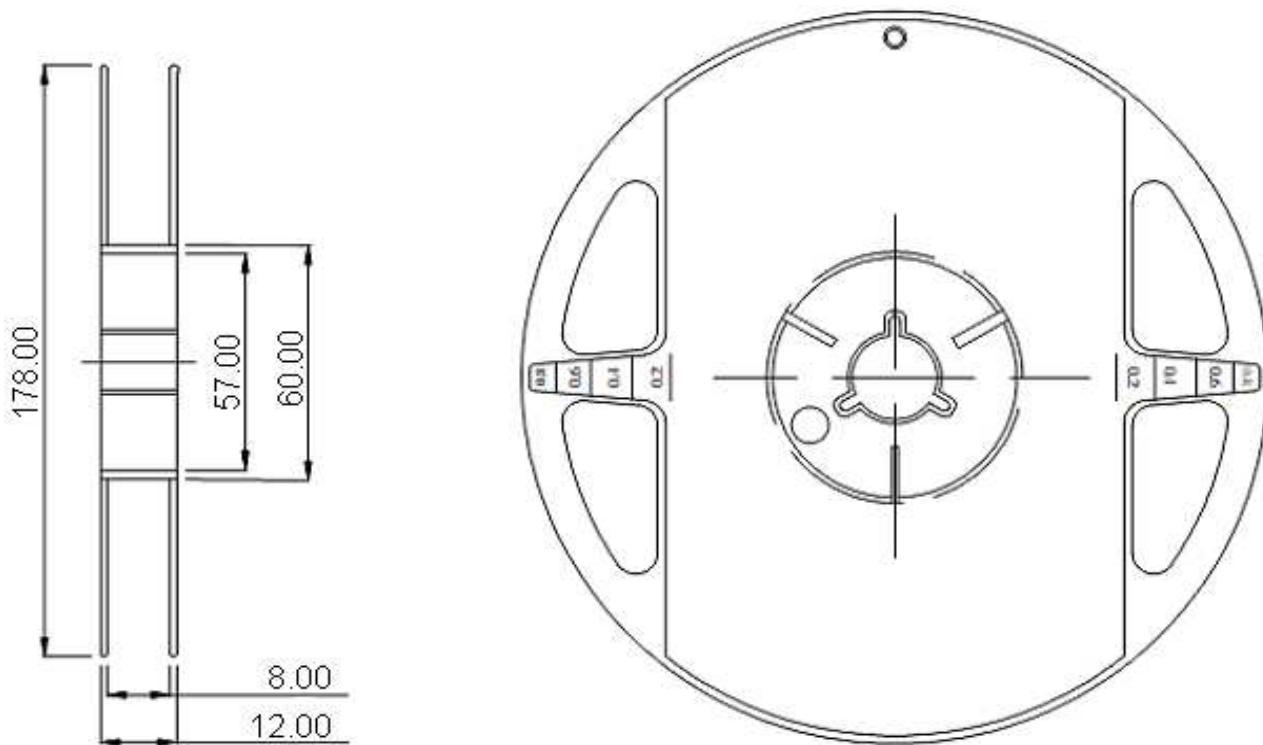
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Packing Specifications



Reel Specifications



SMT Top View LED	
Amber	Green
Blue	
Part No.:	M11M1002
Customer:	

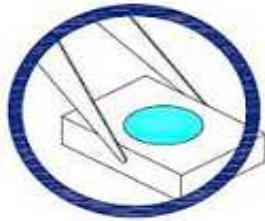
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Handling Precautions

Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. Outside impact may scratch the silicone lens or damage the internal circuitry.

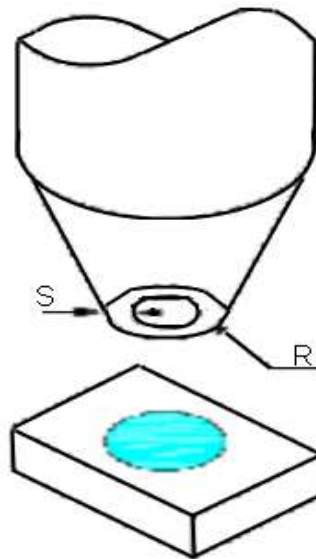


SMT Top View LED			
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4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.

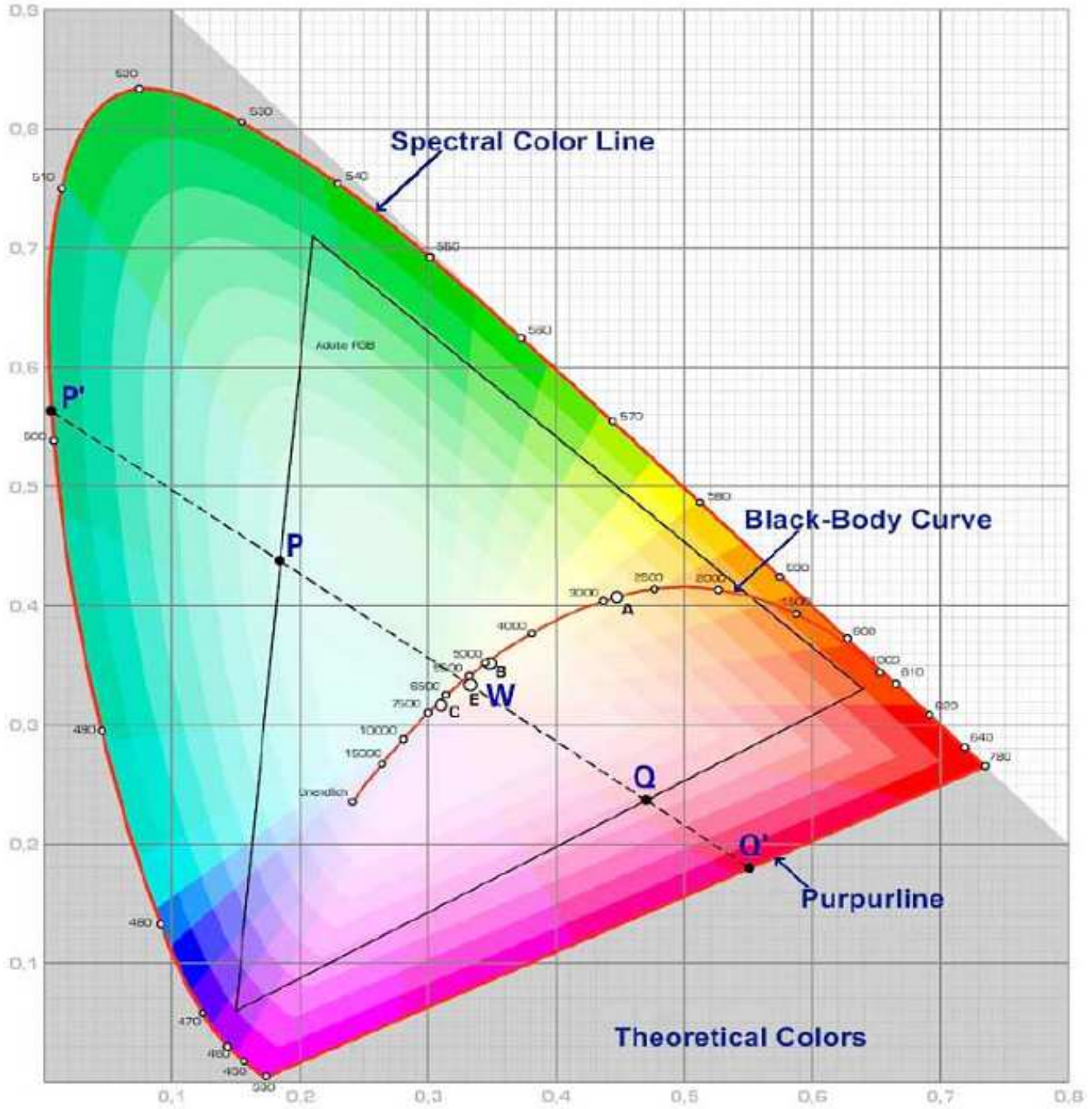


SMT Top View LED			
Amber	Green	Blue	
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Color table curve



SMT Top View LED		
<i>Amber</i>	<i>Green</i>	<i>Blue</i>
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