



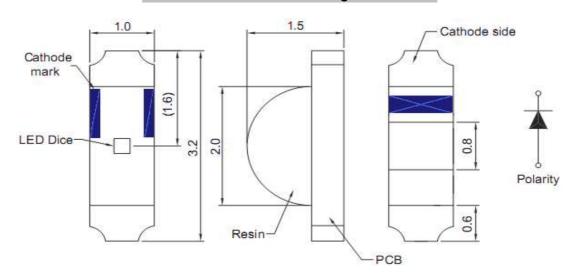




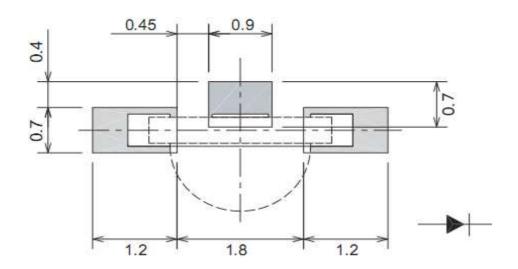
Applications

Interior automotive lighting
 Optical indicators
 Communication Products
 Backlighting
 Toys

Technical Drawing



Recommended Soldering Pattern



Notes:

All dimensions in mm tolerance is \pm 0.1mm unless otherwise noted.

SMT Serie View LED Blue

Part No.: **M11L8013**

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Absolute Maximum Ratings

Ta=25°C

Item	Symbol	InGaN	Unit
Power Dissipation	P_{D}	78	mW
DC Forward Current	I _F	20	mA
Plused Forward Current	I _{FP} *	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=5mA Ta=25°C

Ermitting Color		Blue					
Material	InGaN						
Forward Voltage	typ.	2.8	V_{F}				
Forward voilage	max.	3.15	V_{F}				
Wavelength	λD	472	nm				
_	λP	470	nm				
typ.	Δλ	40	nm				
Color Temperature	min.		K				
Color reinperature	max.		K				
Luminous Intensity *	min.	9	mcd				
Luminous intensity	typ.	26	mcd				
Reverse Current	max.		μA				
Viewing Angle	2Θ1/2	x = 140 y = 120					

^{*} Per NIST standards

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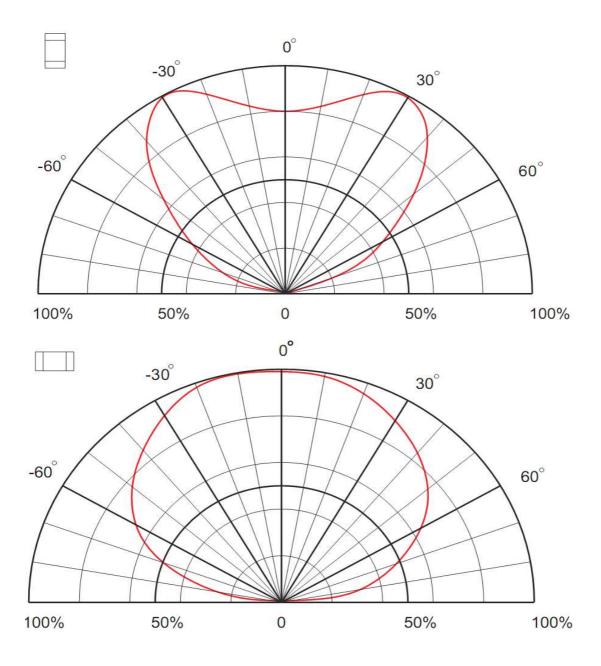








Directive Characteristics



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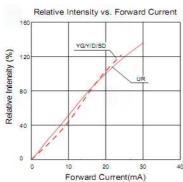


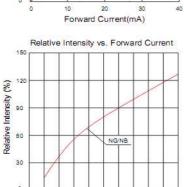




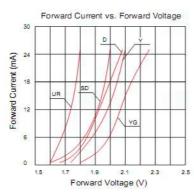


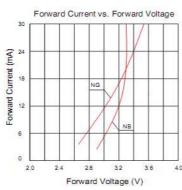
Curvs

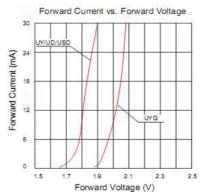


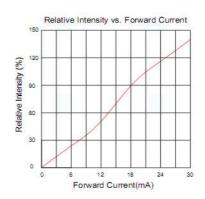


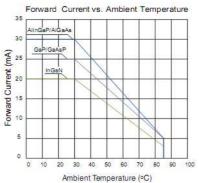
Forward Current(mA)











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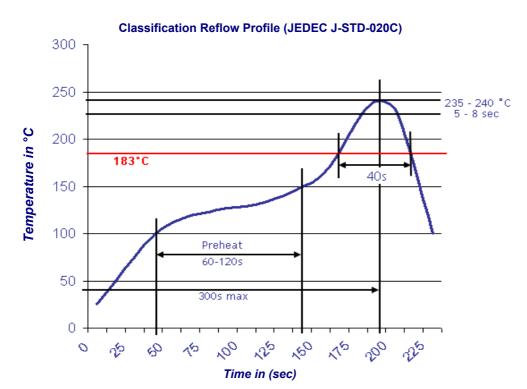






Solder Condition

Lead Free Solder



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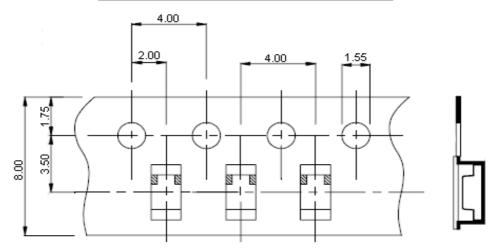




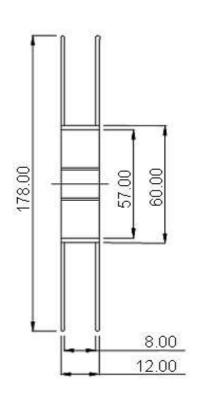


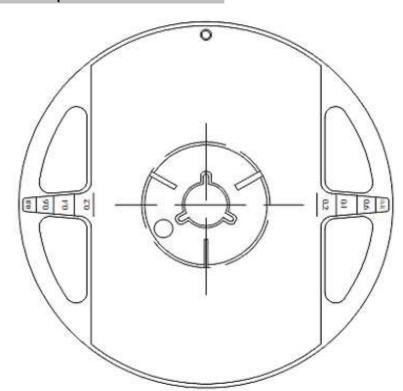


Packing Specifications



Reel Specifications





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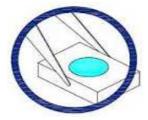




Handling Precautions

Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although ist 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 leads to damage and premature failure of th 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 surfance. 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.



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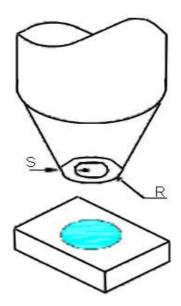








- 4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
- 5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
- 6.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



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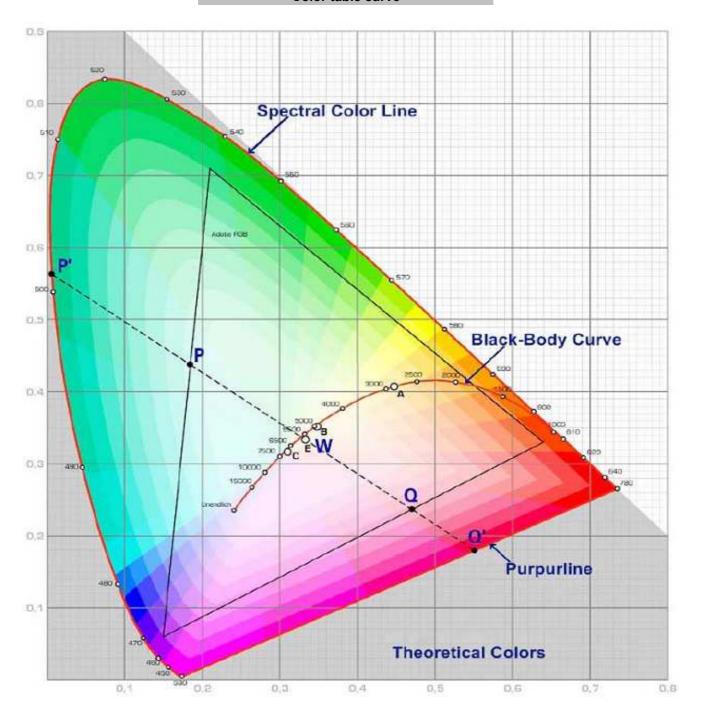








Color table curve



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