



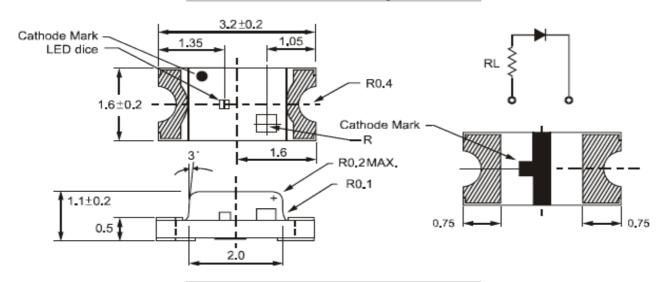




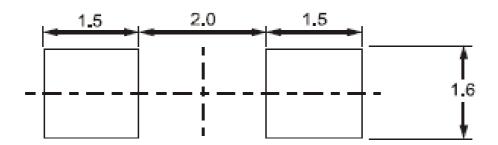
Applications

- 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 Resistor Chip LED Red

Part No.: **M11N5013**

DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	05.12.2009
APPD:	Ping			FINISH	Hui	Sheet	1 from 9









Absolute Maximum Ratings

Ta=25°C

Item	Symbol	GaAsP / GaP	Unit
Power Dissipation	P_{D}		mW
DC Forward Current	I _F	12	mA
Plused Forward Current	I _{FP} *	100	mA
Reverse Voltage	V_R		V
Operating Temperature	T _{OP}	-45 to 85	°C
Storage Temperature	T _{ST}	-45 to 85	°C

^{* 0.1} msec pulse, 10% duty cycle

Electrcal / Optical Characteristics

Ta=25°C

Ermitting Color		Red	
Material		GaAsP / GaP	
Operating Voltage	typ.		V
Operating voitage	max.	15	V
Wavelength	λP	640	nm
typ.	Δλ		nm
Color Temperature	min.		K
Color remperature	max.		K
Forward Current	typ.	7	Α
Forward Current	max.	12	Α
Luminous Intensity *	min.	5.5	mcd
Lummous intensity	typ.	15	mcd
Reverse Current	max.		μA
Viewing Angle	2Θ1/2	120	·

^{*} Per NIST standards

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APPD:	Ping			FINISH	Hui	Sheet	2 from 9

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Directive Characteristics

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APPD:	Ping			FINISH	Hui	Sheet	3 from 9

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Curvs

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	APPD:	Ping			FINISH	Hui	Sheet	4 from 9





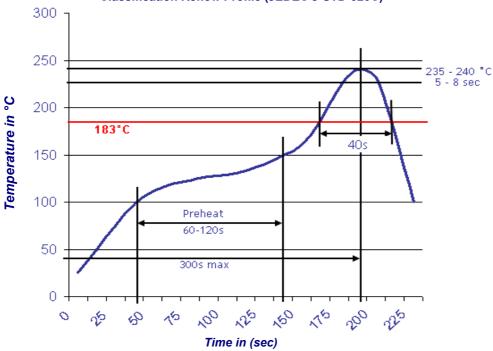




Solder Condition

Lead Free Solder





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APPD:	Ping			FINISH	Hui	Sheet	5 from 9

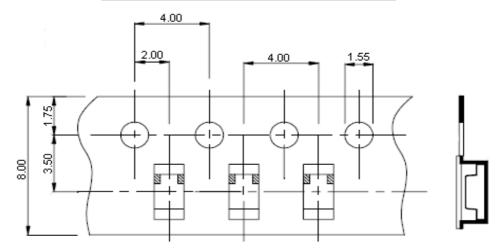




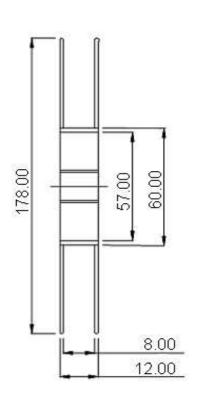


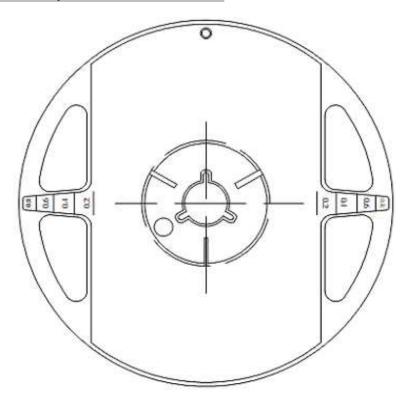


Packing Specifications



Reel Specifications





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DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	05.12.2009
APPD:	Ping			FINISH	Hui	Sheet	6 from 9









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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Part No.: **M11N5013**

DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	05.12.2009
APPD:	Ping			FINISH	Hui	Sheet	7 from 9

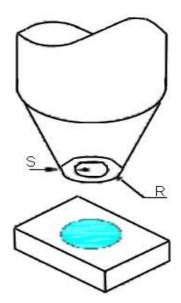








- 4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
- 5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
- 6. 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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Part No.: **M11N5013**

DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	05.12.2009
APPD:	Ping			FINISH	Hui	Sheet	8 from 9

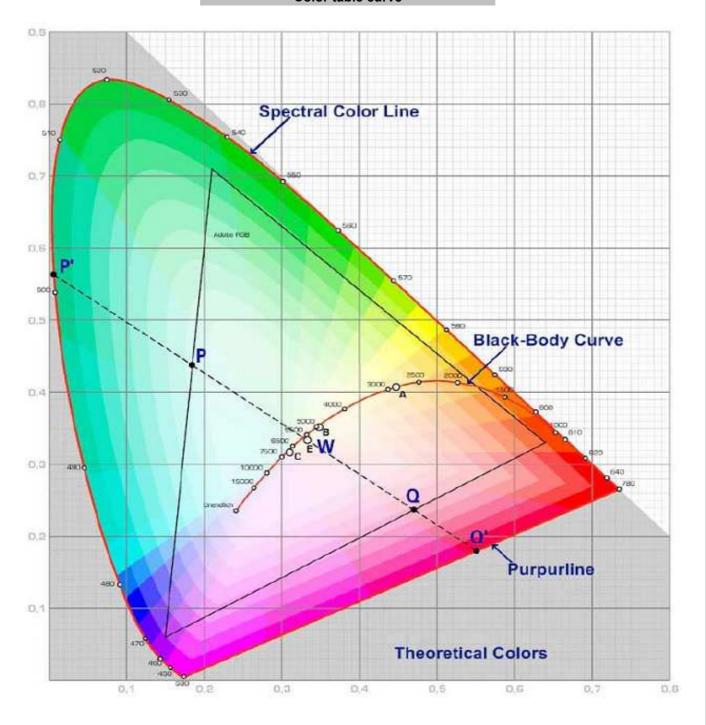








Color table curve



SMT Resistor	Chip	LED
Red		

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DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	05.12.2009
APPD:	Ping			FINISH	Hui	Sheet	9 from 9