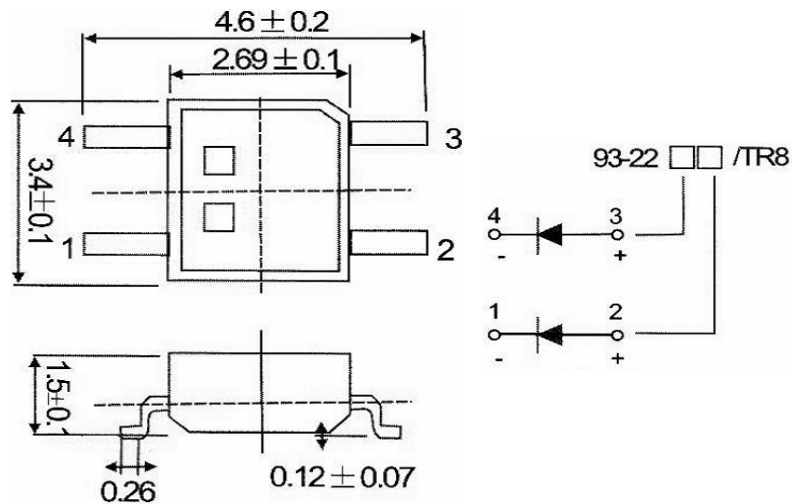


Applications

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

Technical Drawing



Recommended Soldering Pattern

Notes :

All dimensions in mm tolerance is ± 0.1 mm unless otherwise noted.

Reflector SMT LED	
Green	Red
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Absolute Maximum Ratings

Ta=25°C

Item	Symbol	GaP	AlGaInP	Unit
Power Dissipation	P _D	---	---	mW
DC Forward Current	I _F	20	---	mA
Pulsed Forward Current	I _{FP} *	---	---	mA
Reverse Voltage	V _R	---	---	V
Operating Temperature	T _{OP}	---	---	°C
Storage Temperature	T _{ST}	-55 to 100	---	°C

* 0.1 msec pulse, 10% duty cycle

Electrical / Optical Characteristics

I_F=20mA Ta=25°C

Emitting Color Material	Green		Red	
		GaP		AlGaInP
Forward Voltage	typ.	2.1	2.0	V _F
	max.	2.4	2.4	V _F
Wavelength typ.	λ _D	571	639	nm
	λ _P	---	---	nm
	Δλ	---	---	nm
Color Temperature	min.	---	---	K
	max.	---	---	K
Luminous Intensity *	min.	12	24	mcd
	typ.	20	40	mcd
Reverse Current	max.	---	---	μA
Viewing Angle	2Θ1/2	130		

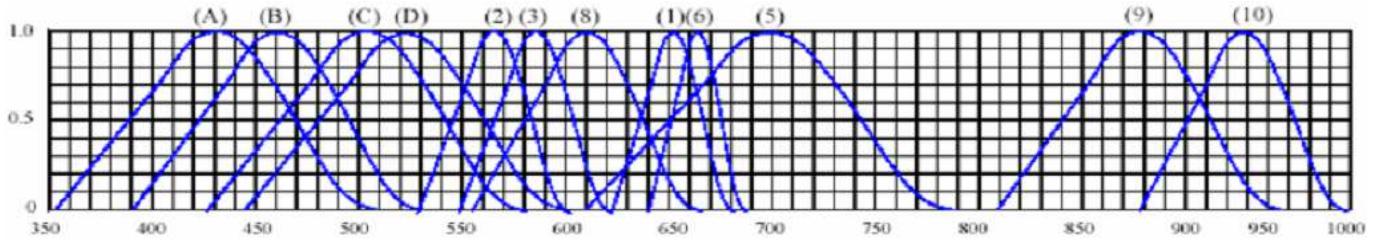
* Per NIST standards

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Curve



Wavelength (nm)

Relative Intensity vs Wavelength

(1)	GaAsP / GaAs 655nm Red	(9)	GaAlAs 880nm
(2)	GaP 568nm Yellow Green	(10)	GaAs & GaAlAs 940nm
(3)	GaAsP / GaP 585nm Yellow	(A)	GaN 430nm Blue
(4)	GaAsP / GaP 635nm Orange & Red	(B)	InGaN 470nm Blue
(5)	GaP 700nm Red	(C)	InGaN 502nm Green
(6)	GaAlAs / GaAs 660nm Red	(D)	InGaN 523nm Green
(8)	GaAsP / GaP 610nm Red		

Reflector SMT LED
Green **Red**

Part No.: **M11H4002**

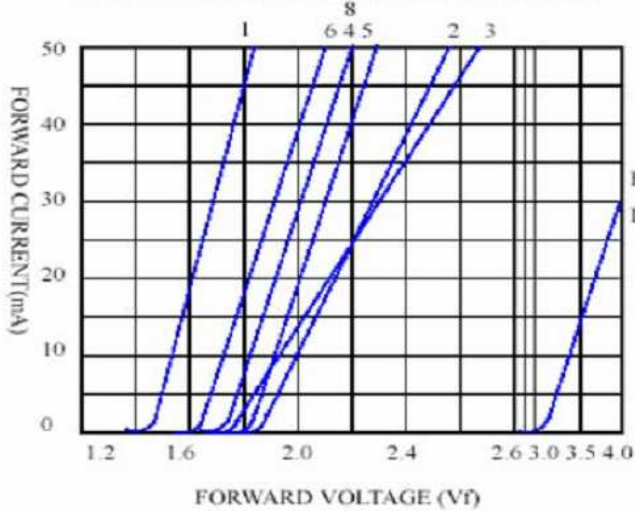
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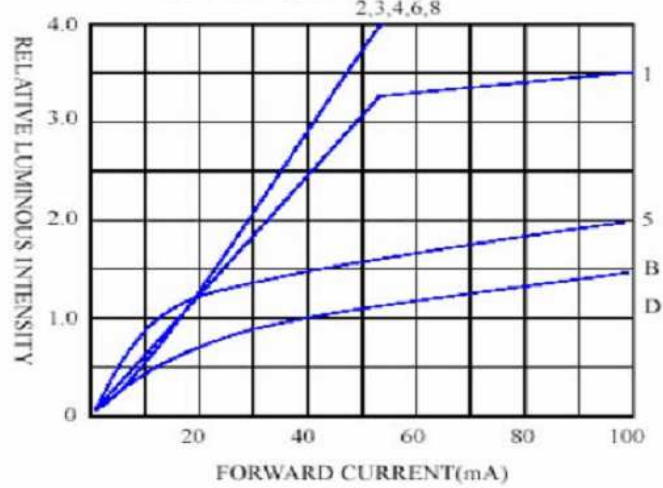


Curve

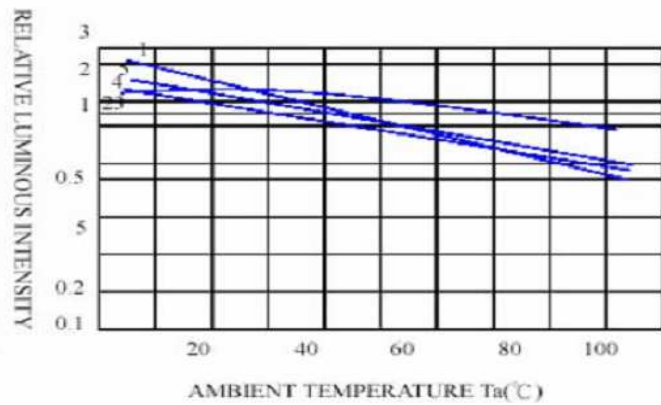
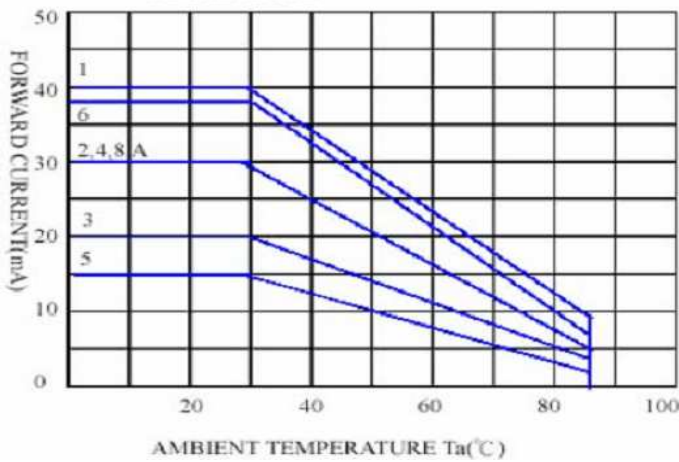
FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

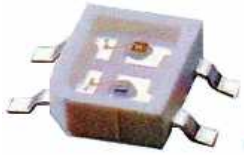


FORWARD CURRENT VS. AMBIENT TEMPERATURE



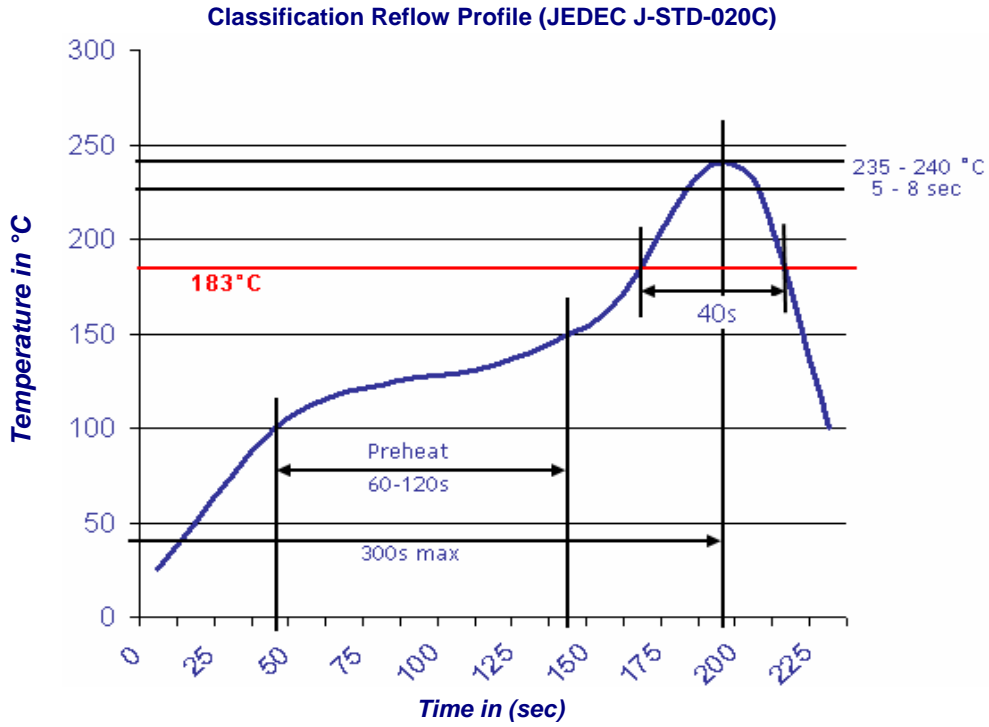
Reflector SMT LED	
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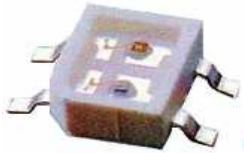
Solder Condition

Lead Free Solder

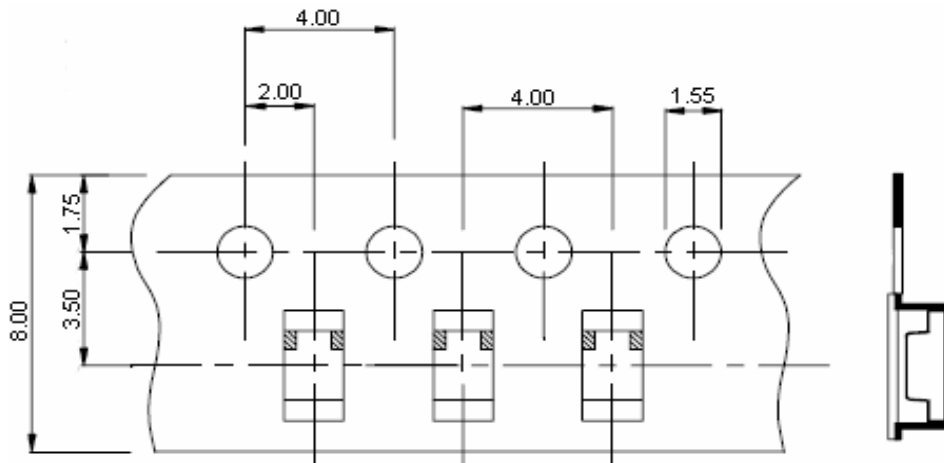


Reflector SMT LED	
Green	Red
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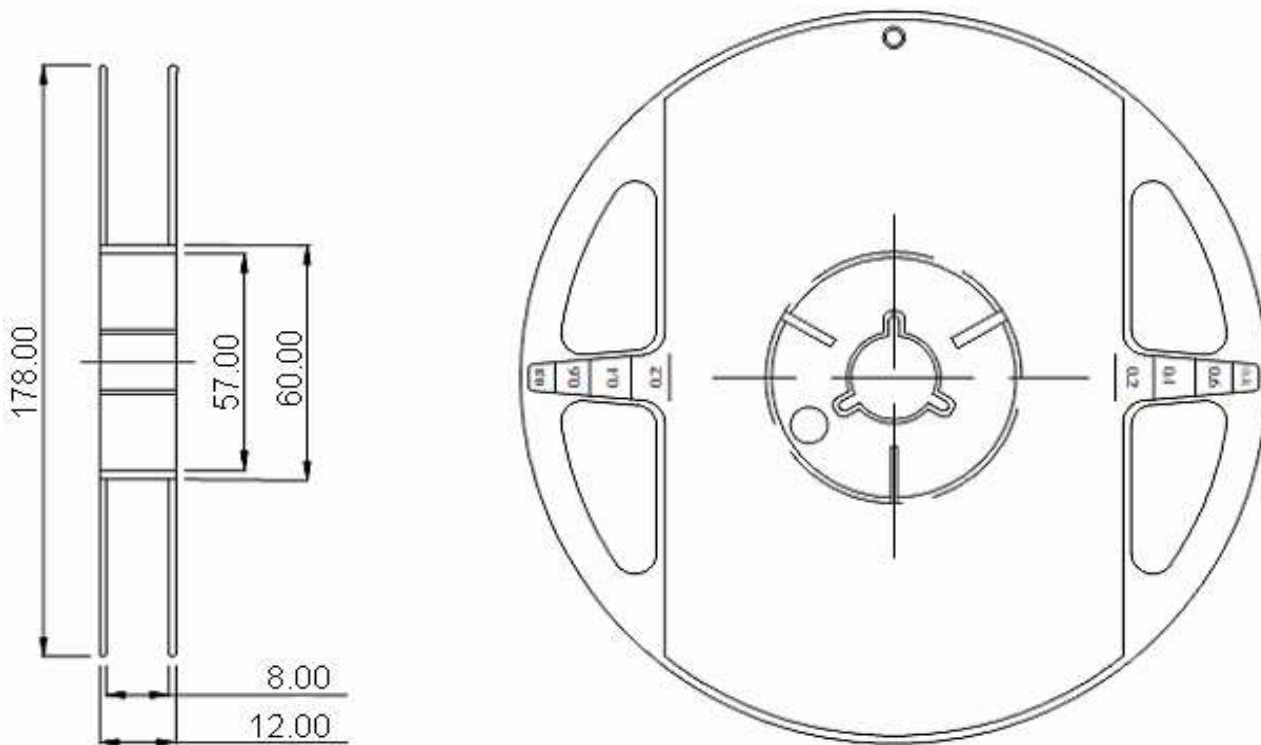
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Packing Specifications



Reel Specifications

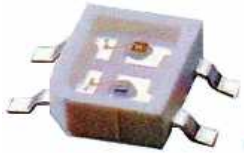


Reflector SMT LED
Green **Red**

Part No.: **M11H4002**

Customer:

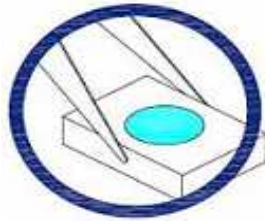
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Handling Precautions

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.

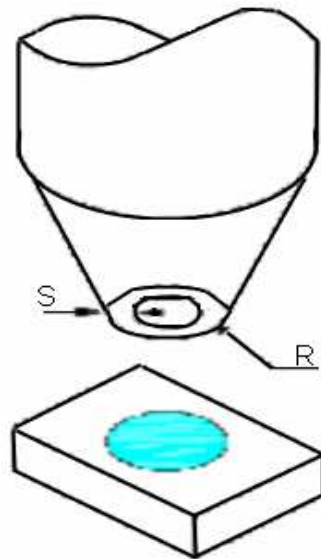


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4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
5. A pliable material is suggested for the nozzle tip to avoid scratching 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.

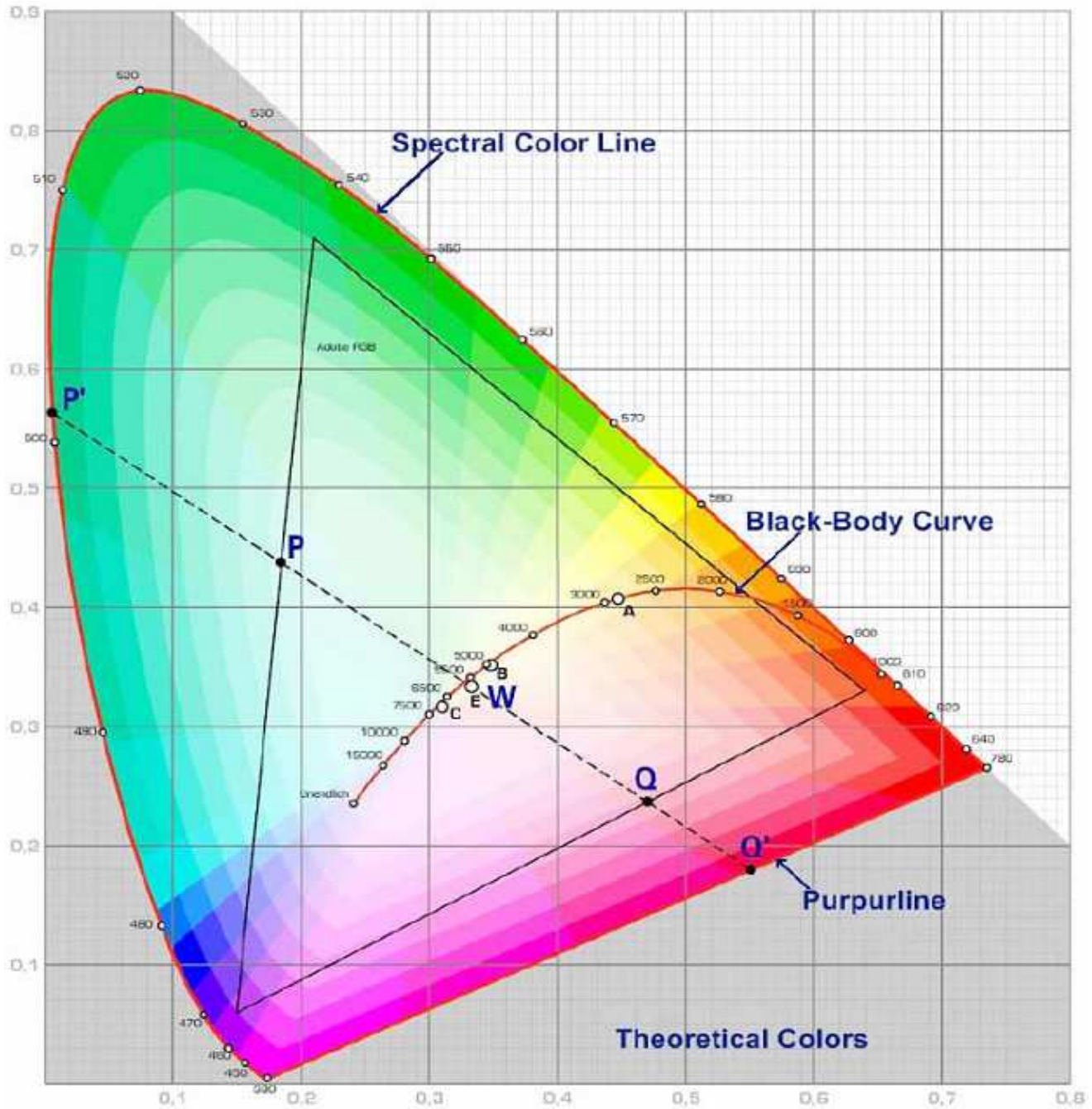


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Color table curve



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