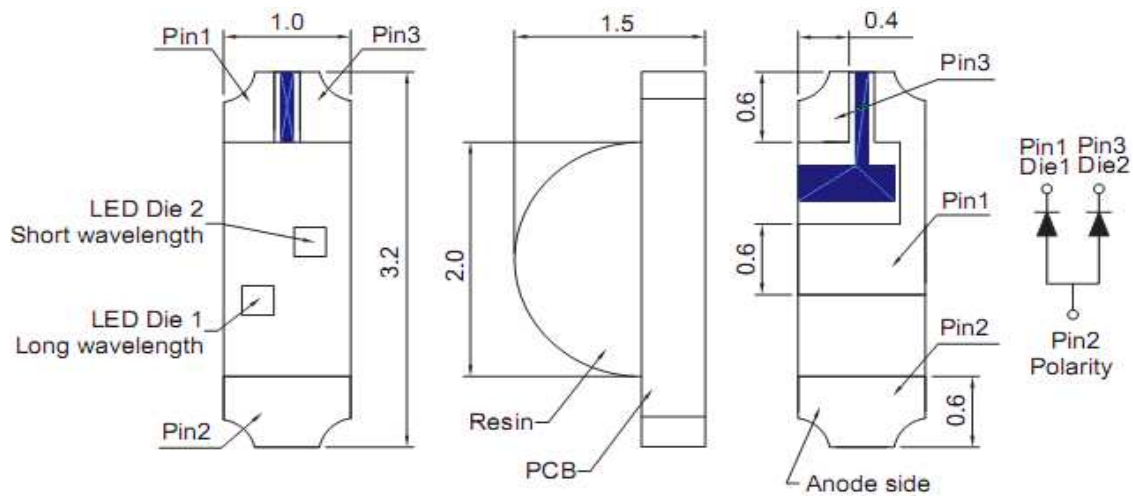




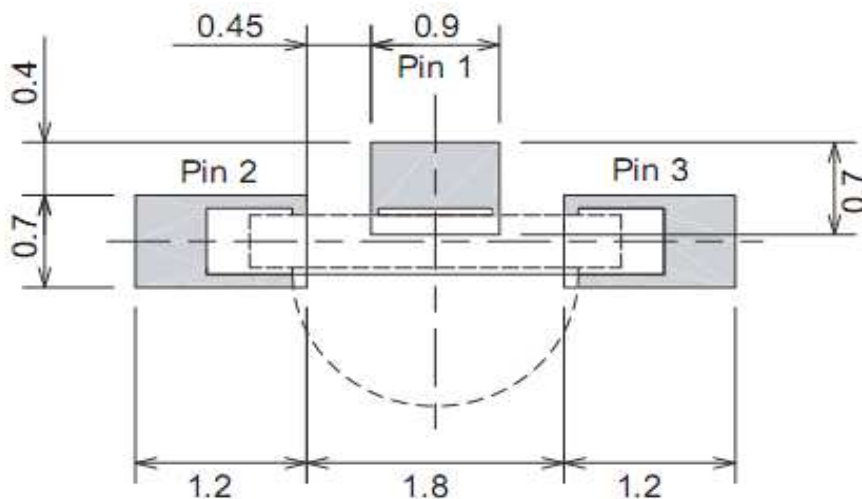
**Applications**

- 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.

<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
Customer:	

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**Absolute Maximum Ratings**

Ta=25°C

Item	Symbol	AllnGaP	InGaN	Unit
Power Dissipation	P <sub>D</sub>	72	78	mW
DC Forward Current	I <sub>F</sub>	30	20	mA
Pulsed Forward Current	I <sub>FP</sub> *	100	80	mA
Reverse Voltage	V <sub>R</sub>	5		V
Operating Temperature	T <sub>OP</sub>	-30 to 80		°C
Storage Temperature	T <sub>ST</sub>	-40 to 85		°C

\* 0.1 msec pulse, 10% duty cycle

**Electrical / Optical Characteristics**

I<sub>F</sub>=20mA Ta=25°C

Emitting Color Material	Amber		Blue	
	AllnGaP		InGaN	
Forward Voltage	typ.	1.9	3.3	V <sub>F</sub>
	max.	2.4	3.9	V <sub>F</sub>
Wavelength typ.	λ <sub>D</sub>	605	470	nm
	λ <sub>P</sub>	609	468	nm
	Δλ	17	40	nm
Color Temperature	min.	---	---	K
	max.	---	---	K
Luminous Intensity *	min.	56	36	mcd
	typ.	120	60	mcd
Reverse Current	max.	---		μA
Viewing Angle	2Θ1/2	x = 140 y = 120		

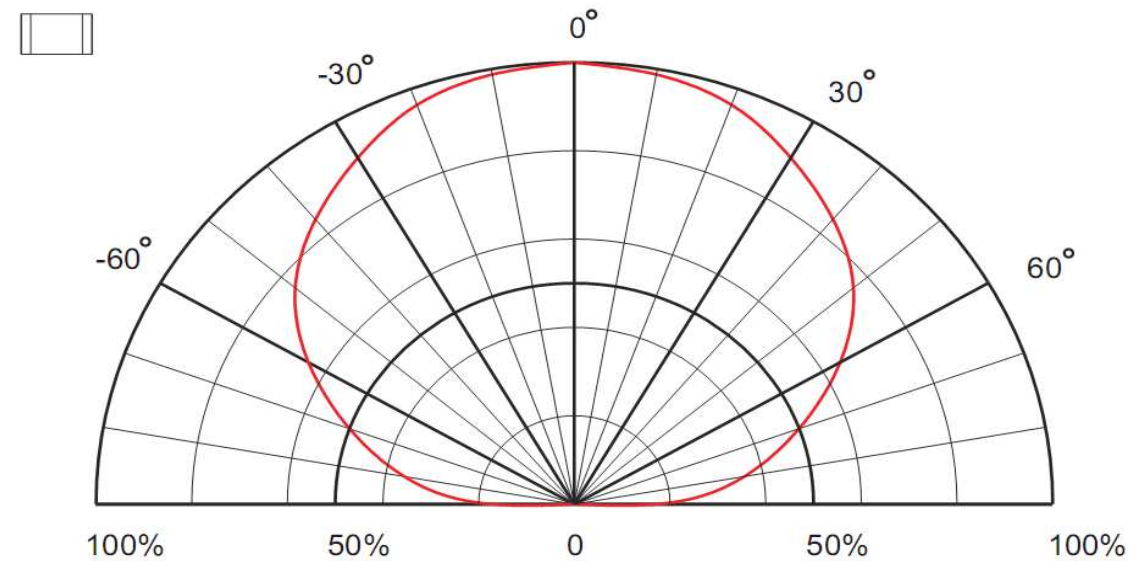
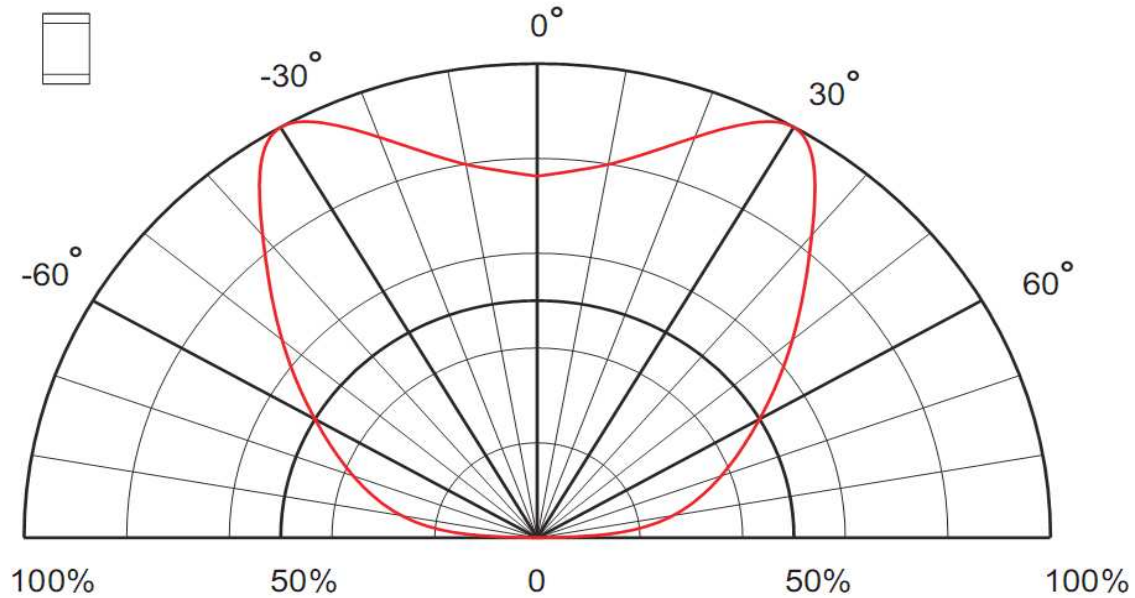
\* Per NIST standards

<b>SMT Side View LED</b>	
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**Directive Characteristics**

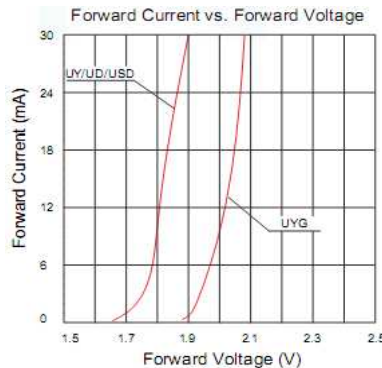
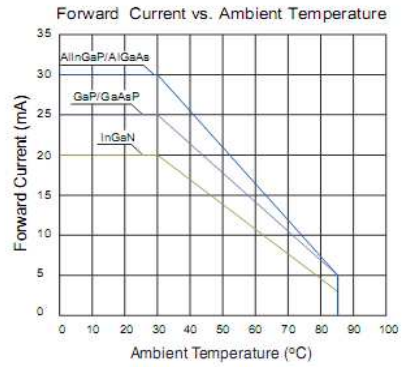
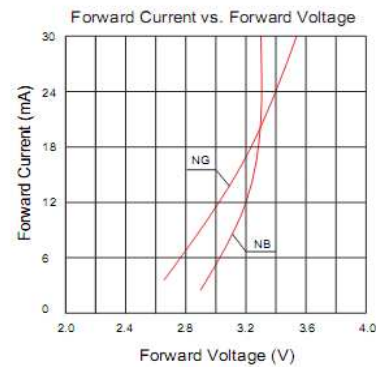
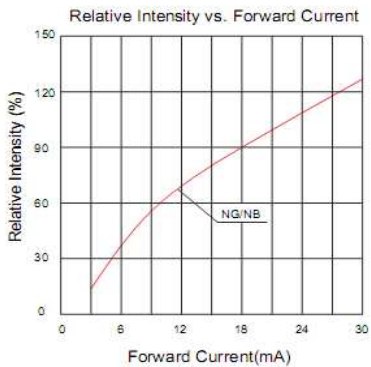
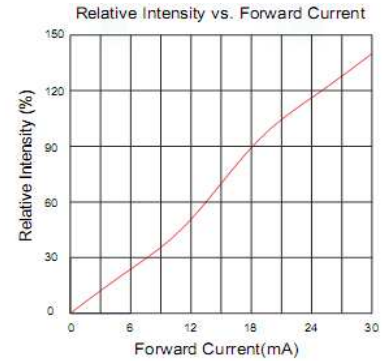
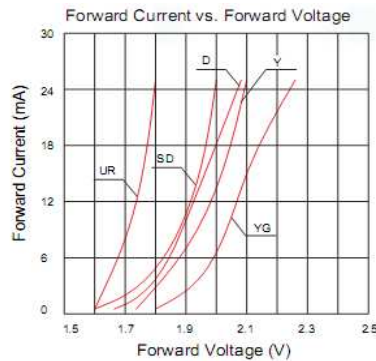
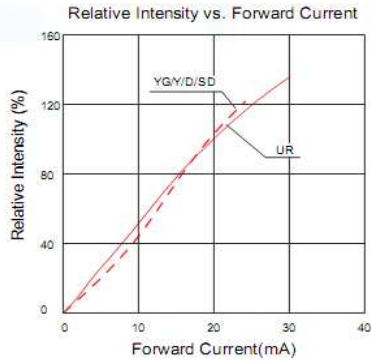


<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
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**Curvs**



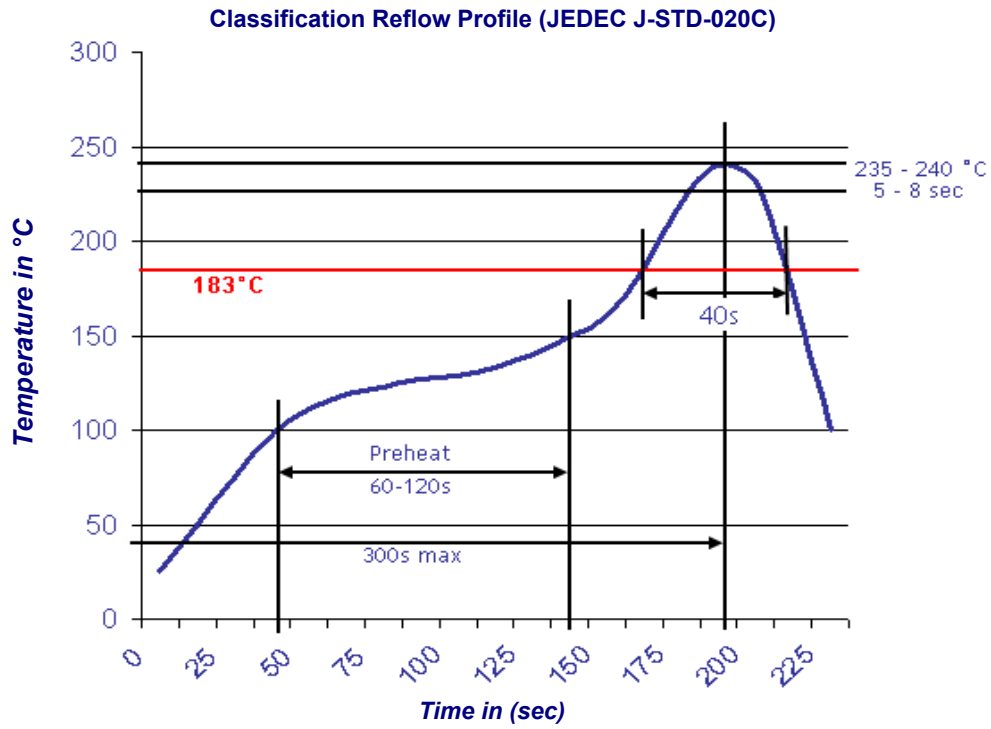
<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
Customer:	

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**Solder Condition**

**Lead Free Solder**

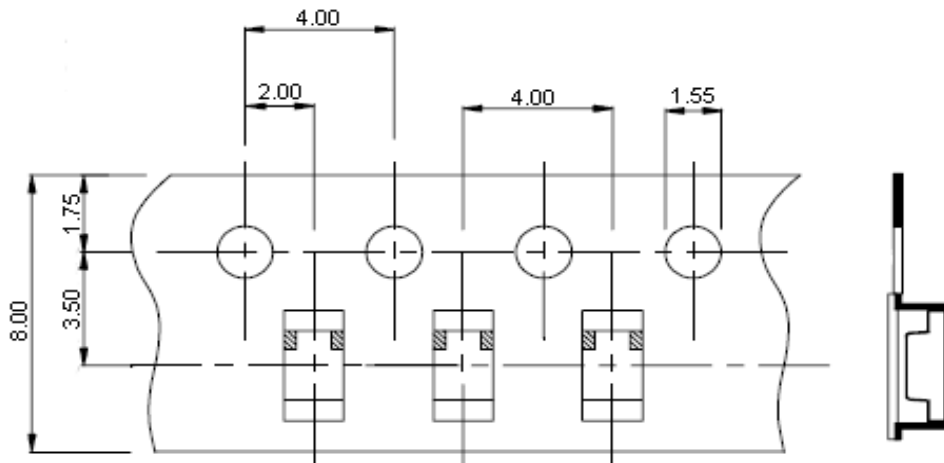


<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
Customer:	

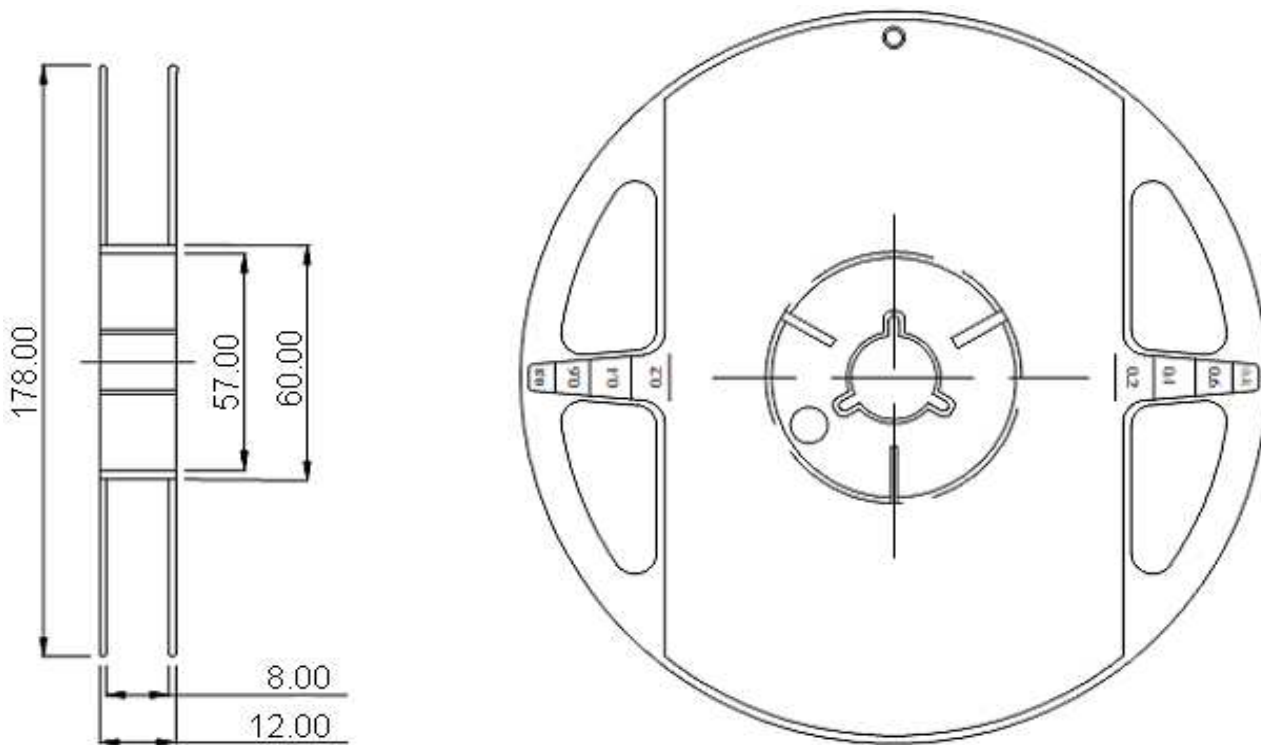
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**Packing Specifications**



**Reel Specifications**



**SMT Side View LED**  
**Amber Blue**

Part No.: **M11L9009**

Customer:

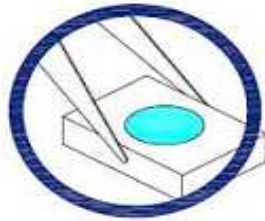
DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	04.12.2009
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**Handling Precautions**

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.

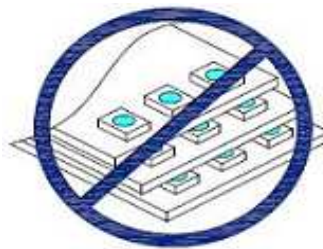
1. Handle the component along the side surfaces by using forceps or appropriate tools



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.

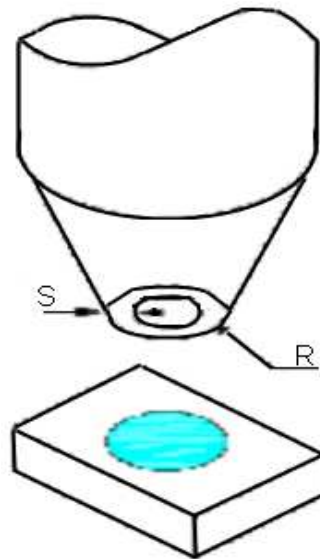


<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
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4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
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.



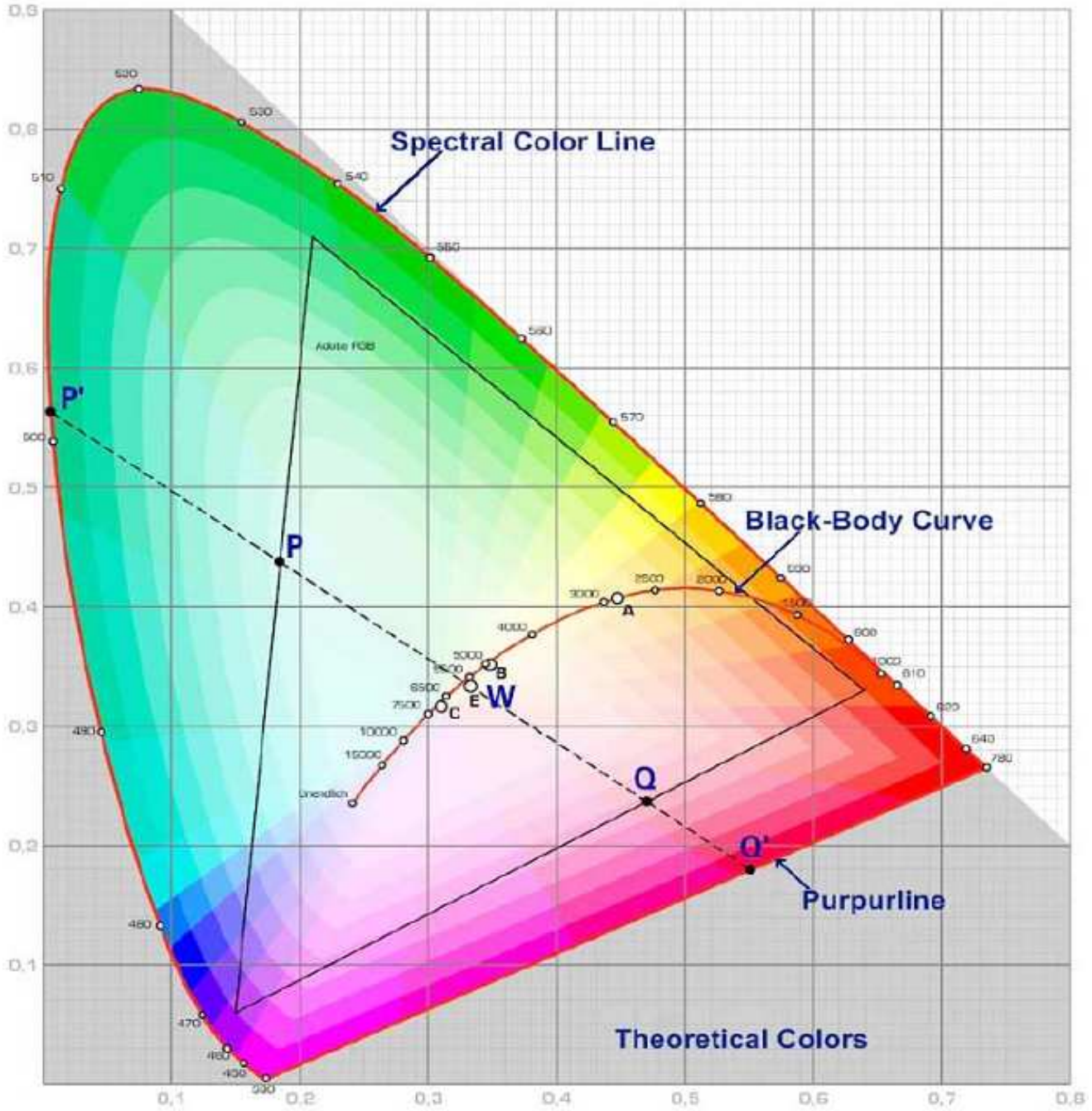
<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
Customer:	

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**Color table curve**



<b>SMT Side View LED</b>	
<b>Amber</b>	<b>Blue</b>
Part No.:	<b>M11L9009</b>
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