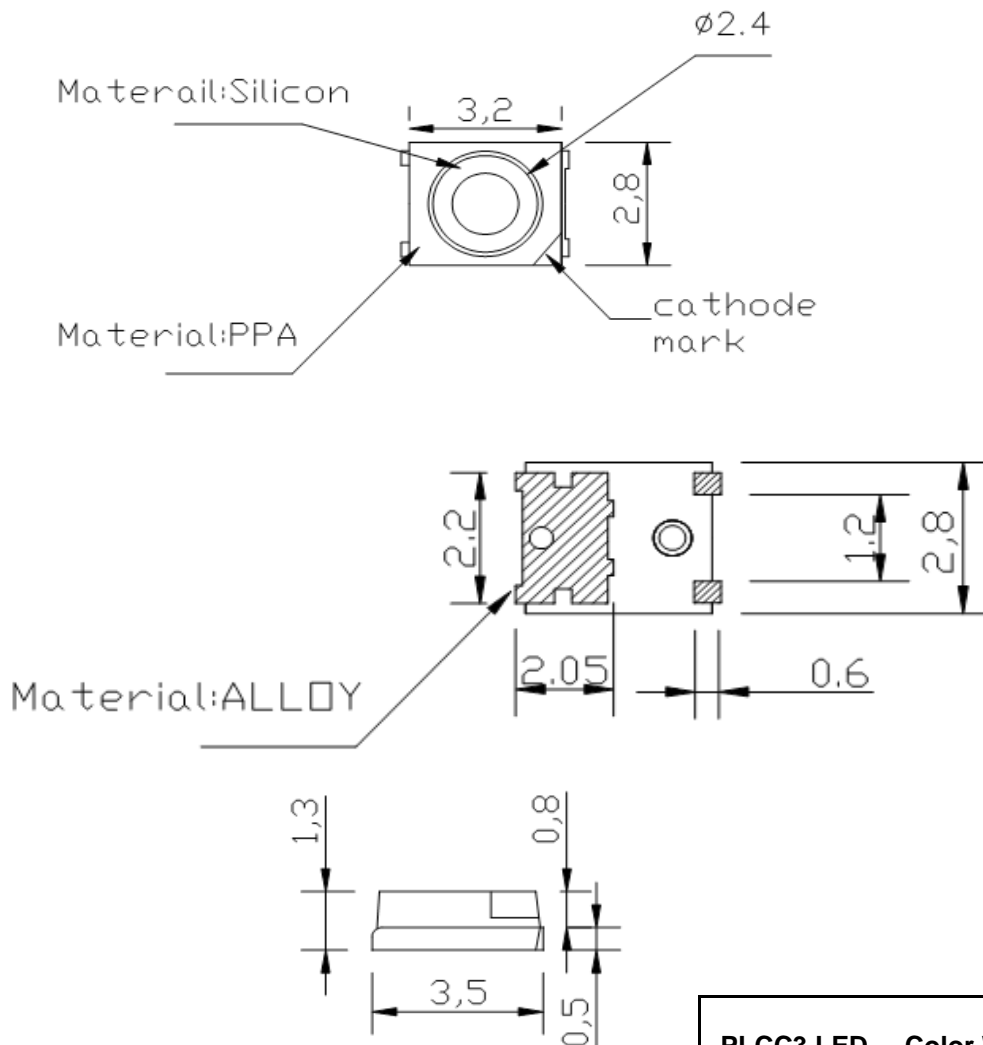




Applications

- Interior automotive lighting(dashboard backlight etc...)
- Optical indicators
- Communication Products
- Backlighting
- Toys
- Tradffic Signal

Package Dimensions



Notes:

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

PLCC3 LED	Color White
Part No.:	M11A4002
Customer:	

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	1 from 12



Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Forward Current	If	150	mA
Power Dissipation	PD	0,5	W
Junction Temperature	TJ	125	°C
Operating Temperature	Topr	-30° ~ +85°C	°C
Storage Temperature	Tstg	-40° ~ +120°C	°C

*Pulse width ≤0.1msec duty ≤1/10

Typical Electrical & Optical Characteristics (IF=20mA and Ta = 25°C)

M11A4002	Code	Color Rank			
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Muminous Flux		21	27	----	Lm
Correlated Color Temp.	CCT	----	3000	----	K
CRI	Ra	70	75	----	---
Forward Voltage	Vf	----	3,2	4,5	V
View Angle	20 1/2	120			deg.

Ranks Combination (IF = 20mA)

Rank			
Luminious Intensity			

Notes:

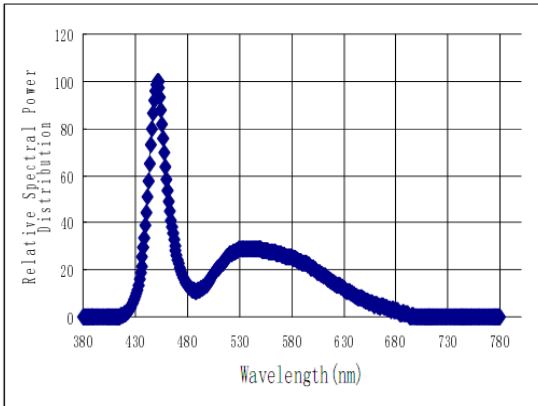
1. Tolerance of measurement of luminous intensity	: ±15%	PLCC3 LED Color White
2. Tolerance of measurement of chromatic coordinates	: ±0.02	
3. Tolerance of measurement of forward voltage	: ±0.1V	Part No.: M11A4002

Customer:

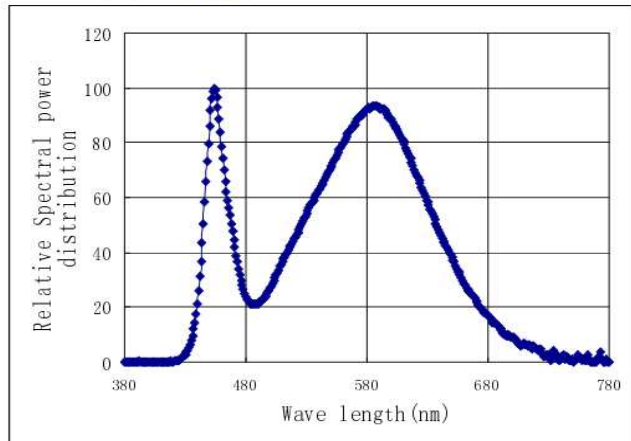
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	2 from 12



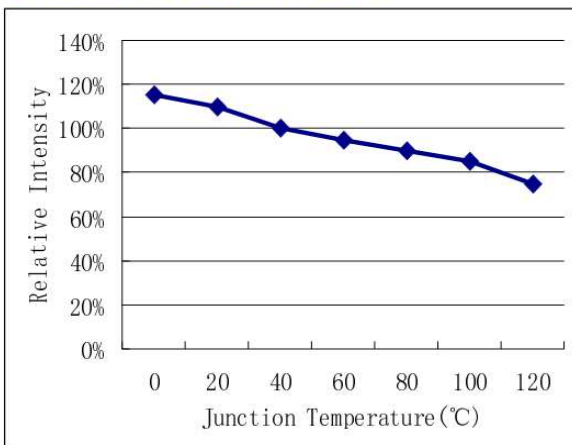
**White color spectrum, TA=25°C
 Pure White**



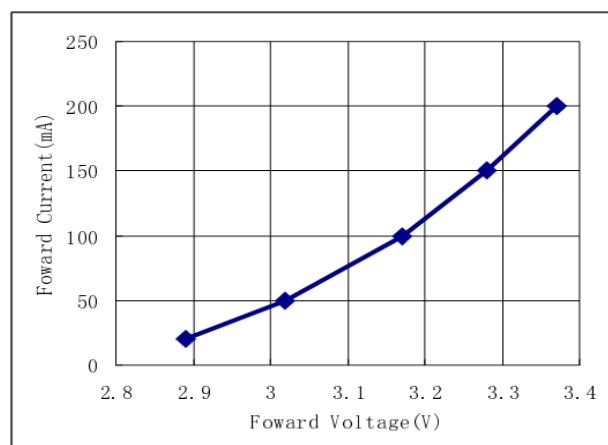
Warm white



**Relative Light Output vs. Junction Temperature
 (All series) at IF=150mA, TA=25°C**



**Forward Voltage vs. Forward Current, TA=25°C
 (Pure white, Warm white, blue and green)**



PLCC3 LED Color White

Part No.: **M11A4002**

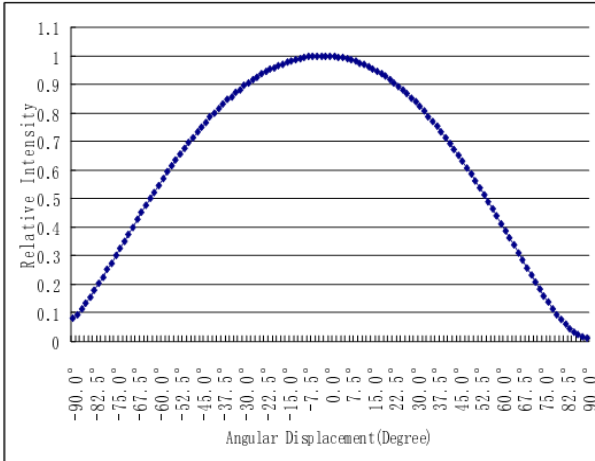
Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	3 from 12

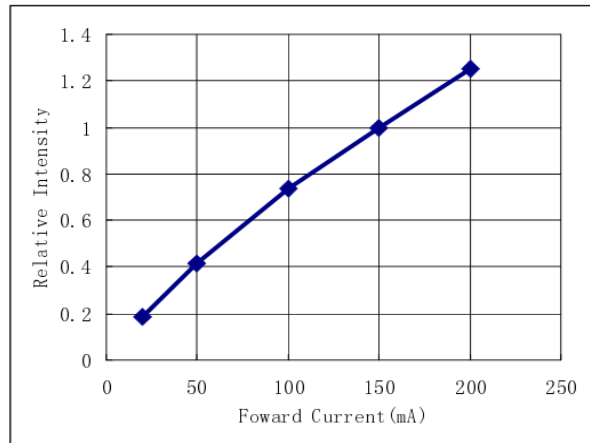


Typical Electrical/ Optical Characteristics Curves (Ta=25°C Unless Otherwise Noted)

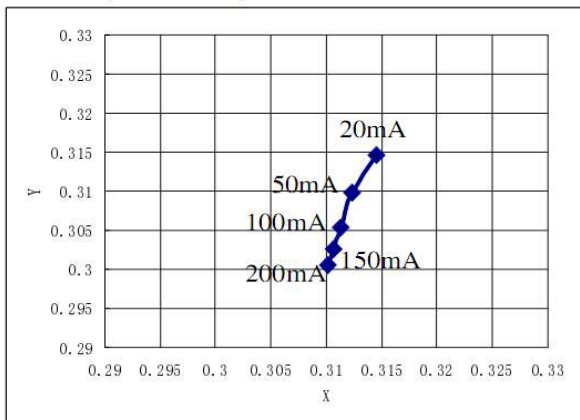
Typical Radiation(All series)



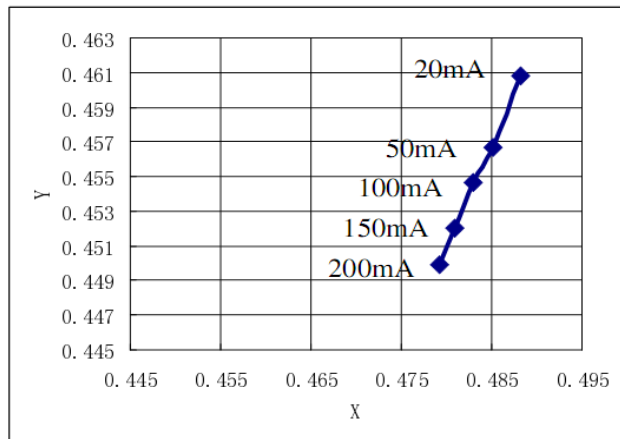
Forward Current VS Relative Luminosity(All series)



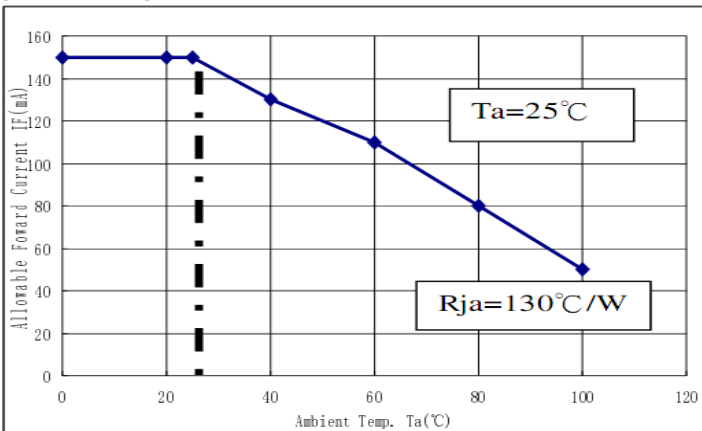
Forward Current VS Chromaticity Coordinate: TA=25°C (Pure white)



Forward Current VS Chromaticity Coordinate: TA=25°C (Warm white)



Ambient Temperature. VS Allowable Forward Current (All series)



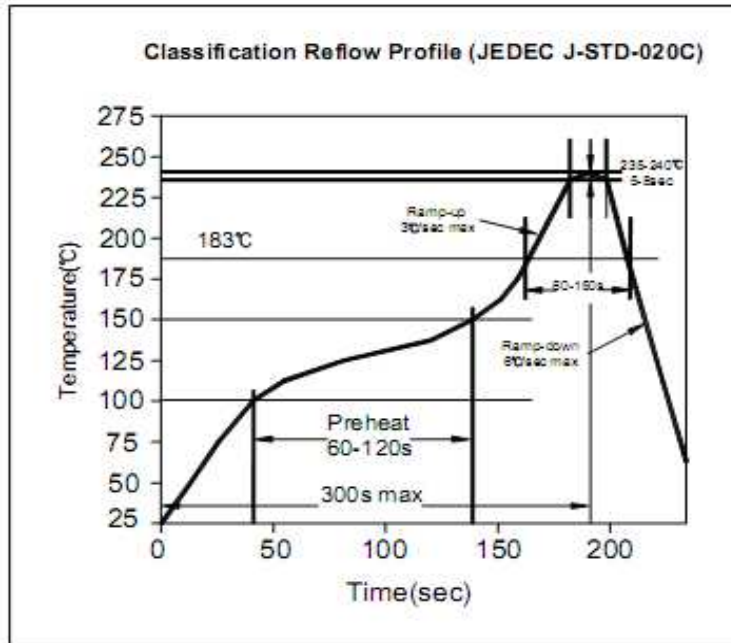
PLCC3 LED	Color White
Part No.:	M11A4002
Customer:	

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	4 from 12

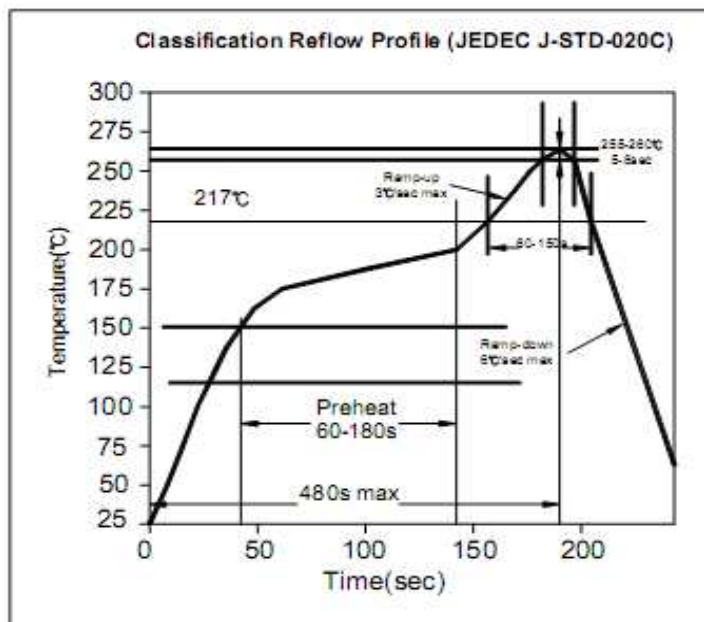


Solder Condition

lead solder



lead free solder



PLCC3 LED Color White

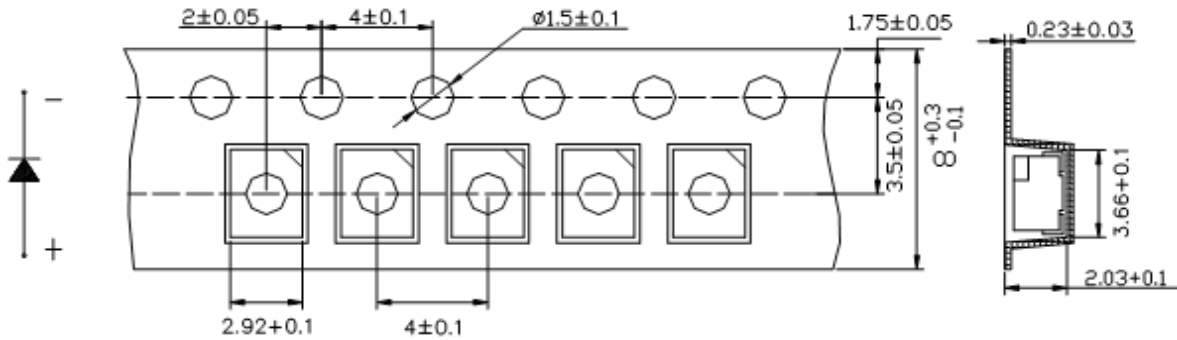
Part No.: **M11A4002**

Customer:

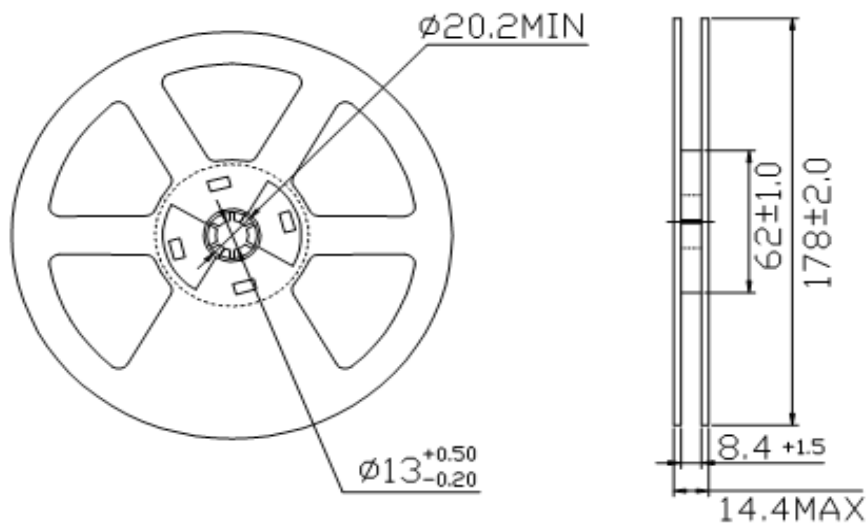
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	5 from 12



Packing Specifications:



Reel Specifications



Dimensions are specified as follows: mm

Notes:

- 1) The packing only appropriate for ECGD
- 2) Normal packing quantity: 2,000pcs/reel

PLCC3 LED Color White

Part No.: **M11A4002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	6 from 12

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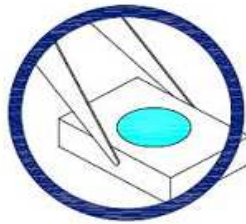




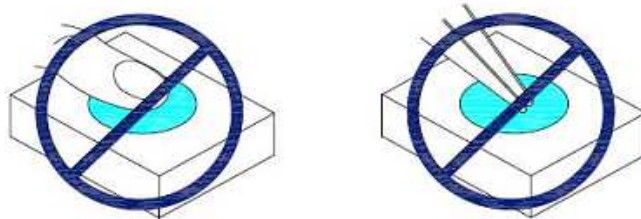
Handling Precautions

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 leads to damage and premature failure of the LED.

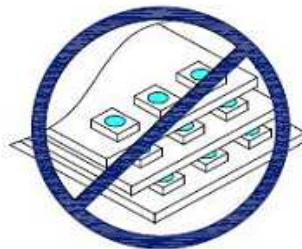
1. Handle the component along the side surfaces by using forceps or appropriate tools.



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.



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.

PLCC3 LED Color White									
Part No.:	M11A4002								
Customer:									
DRW:	Harry	CHKD:	Dustin	MATL:	Wilson	TOLERANCE:	Mason	DATE:	24.07.2009
APPD:	Jason			FINISH:	John		Sheet No.:	7 from 12	

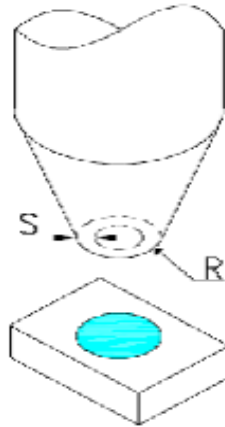
DRW:	Harry	CHKD:	Dustin	MATL:	Wilson	TOLERANCE:	Mason	DATE:	24.07.2009
APPD:	Jason			FINISH:	John		Sheet No.:	7 from 12	





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.



PLCC3 LED	Color White
Part No.:	M11A4002
Customer:	

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	8 from 12

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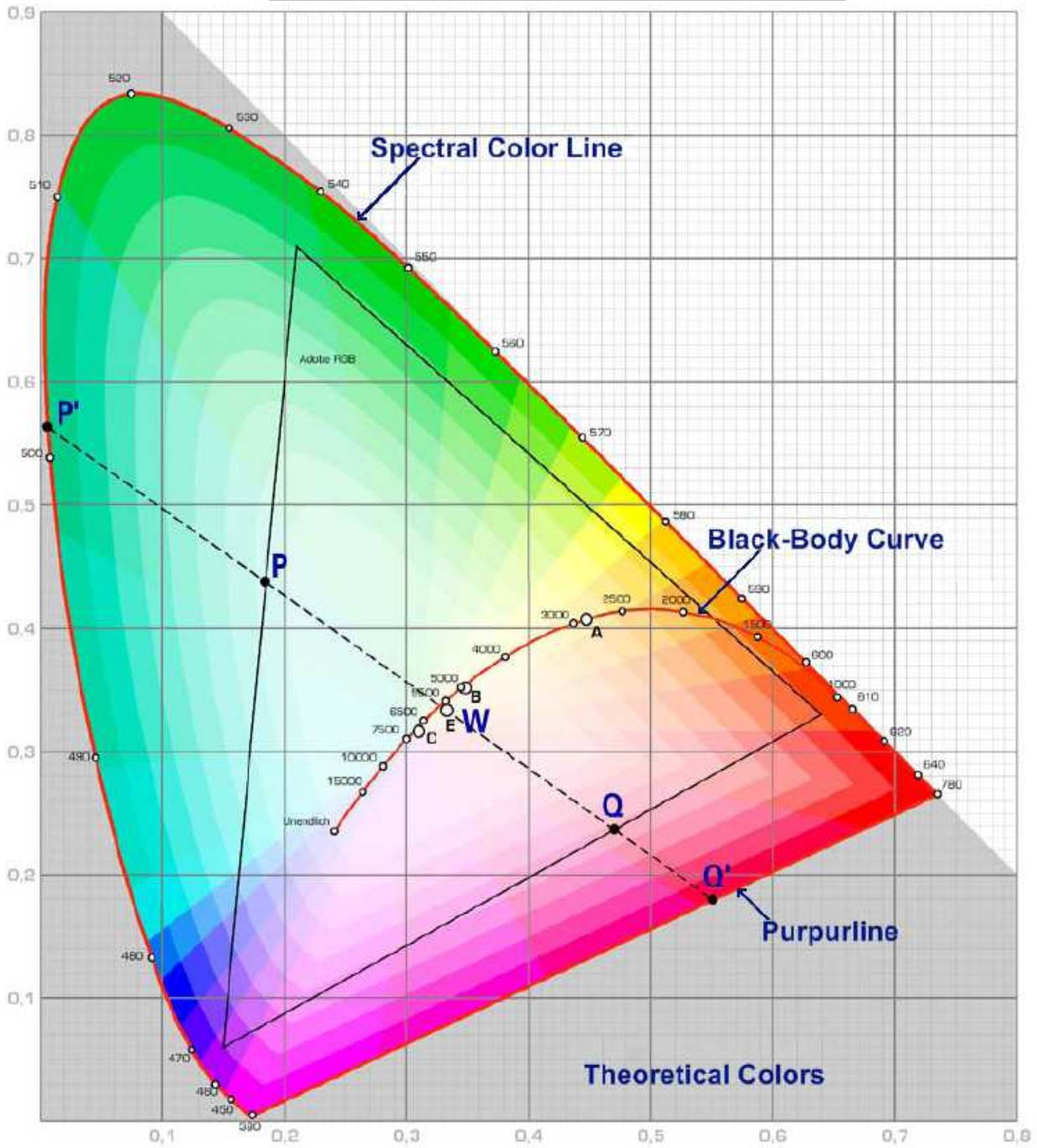
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Color table curve



PLCC3 LED	Color White
Part No.:	M11A4002
Customer:	

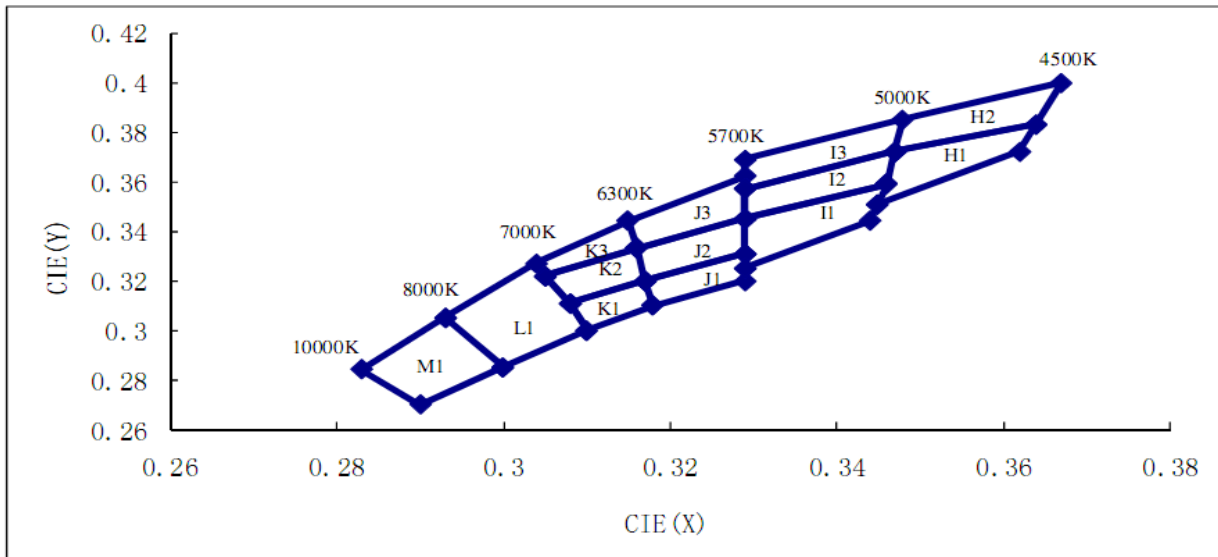
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE	24.07.2009
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BIN	CHR-X	CHR-Y	TC(K)	BIN	CHR-X	CHR-Y	TC(K)
M1	0.293	0.305	9000	J1	0.329	0.331	6050
	0.283	0.284			0.317	0.32	
	0.29	0.27			0.318	0.31	
	0.3	0.285			0.329	0.32	
L1	0.304	0.327	7500	I3	0.329	0.325	5350
	0.293	0.305			0.348	0.385	
	0.3	0.285			0.329	0.369	
	0.31	0.3			0.329	0.362	
K3	0.308	0.311	6700	I2	0.329	0.357	5350
	0.305	0.322			0.329	0.345	
	0.316	0.333			0.346	0.359	
	0.316	0.333			0.346	0.359	
K2	0.305	0.322	6700	I1	0.329	0.345	5350
	0.308	0.311			0.329	0.331	
	0.317	0.32			0.329	0.325	
	0.317	0.32			0.344	0.344	
K1	0.308	0.311	6700	H2	0.345	0.351	4800
	0.31	0.3			0.367	0.4	
	0.318	0.31			0.348	0.385	
	0.329	0.362			0.347	0.372	
J3	0.315	0.344	6050	H1	0.364	0.383	4800
	0.316	0.333			0.364	0.383	
	0.329	0.345			0.347	0.372	
	0.329	0.357			0.346	0.359	
J2	0.329	0.345	6050		0.345	0.351	
	0.316	0.333		0.362	0.372		
	0.317	0.32					
	0.329	0.331					

Remark : J1 J2 K1 K2 I1 (White and lightly Purplish) J2 J3 K2 K3 (White and lightly Yellowish)
I2 I3 H1 H2 (White and deeply Yellowish) Customer can choose any group

PLCC3 LED Color White

Part No.: **M11A4002**

Customer:

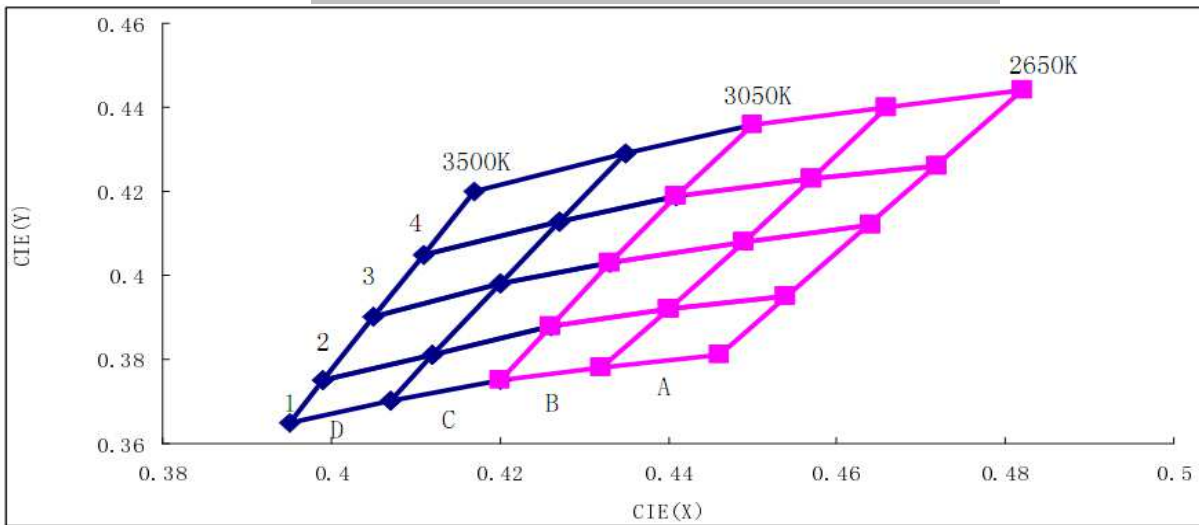
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BIN	CHR-X	CHR-Y	TC (K)	BIN	CHR-X	CHR-Y	TC (K)
D4	0.435	0.429	3375	B4	0.466	0.44	2950
	0.417	0.42			0.45	0.436	
	0.411	0.405			0.441	0.419	
	0.427	0.413			0.457	0.423	
D3	0.427	0.413	3375	B3	0.457	0.423	2950
	0.411	0.405			0.441	0.419	
	0.405	0.39			0.433	0.403	
	0.42	0.398			0.449	0.408	
D2	0.42	0.398	3375	B2	0.449	0.408	2950
	0.405	0.39			0.433	0.403	
	0.399	0.375			0.426	0.388	
	0.412	0.381			0.44	0.392	
D1	0.412	0.381	3375	B1	0.44	0.392	2950
	0.399	0.375			0.426	0.388	
	0.395	0.365			0.42	0.375	
	0.407	0.37			0.432	0.378	
C4	0.45	0.436	3250	A4	0.482	0.444	2750
	0.435	0.429			0.466	0.44	
	0.427	0.413			0.457	0.423	
	0.441	0.419			0.472	0.426	
C3	0.441	0.419	3150	A3	0.472	0.426	2750
	0.427	0.413			0.457	0.423	
	0.42	0.398			0.449	0.408	
	0.433	0.403			0.464	0.412	
C2	0.433	0.403	3150	A2	0.464	0.412	2750
	0.42	0.398			0.449	0.408	
	0.412	0.381			0.44	0.392	
	0.426	0.388			0.454	0.395	
C1	0.426	0.388	3150	A1	0.454	0.395	2750
	0.412	0.381			0.44	0.392	
	0.407	0.37			0.432	0.378	
	0.42	0.375			0.446	0.381	

PLCC3 LED Color White

Part No.: **M11A4002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	11 from 12

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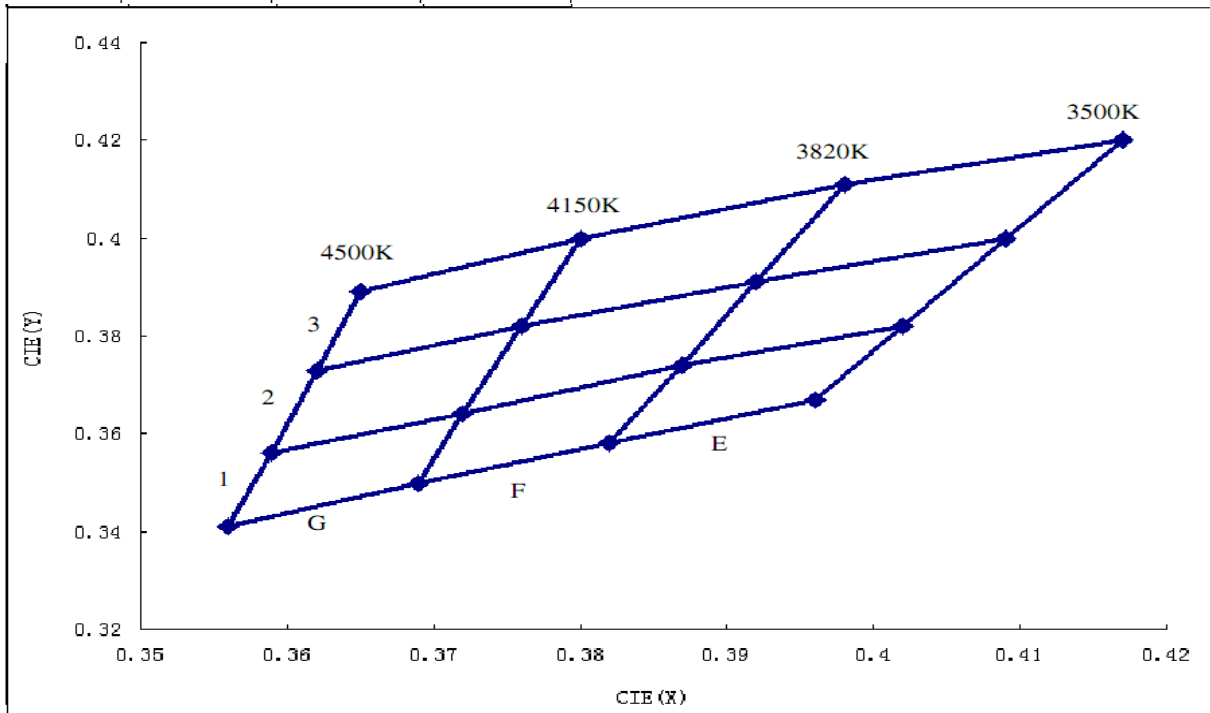
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BIN	CHR-X	CHR-Y	TC (K)	BIN	CHR-X	CHR-Y	TC (K)
G3	0.38	0.4	4325	F1	0.387	0.374	3985
	0.365	0.389			0.372	0.364	
	0.362	0.373			0.369	0.35	
	0.376	0.382			0.382	0.358	
G2	0.376	0.382	4325	E3	0.417	0.42	3660
	0.362	0.373			0.398	0.411	
	0.359	0.356			0.392	0.391	
	0.372	0.364			0.409	0.4	
G1	0.372	0.364	4325	E2	0.409	0.4	3660
	0.359	0.356			0.392	0.391	
	0.356	0.341			0.387	0.374	
	0.369	0.35			0.402	0.382	
F3	0.398	0.411	3985	E1	0.402	0.382	3660
	0.38	0.4			0.387	0.374	
	0.376	0.382			0.382	0.358	
	0.392	0.391			0.396	0.367	
F2	0.392	0.391	3985				
	0.376	0.382					
	0.372	0.364					
	0.387	0.374					



PLCC3 LED	Color White
Part No.:	M11A4002
Customer:	

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.07.2009
APPD:	Jason			FINISH	John		Sheet No.	12 from 12