Bridgelux® SMD 3030 0.2W 3V

Product Data Sheet DS1729

Introduction

SMD 3030

Features

- This 3030 product is equivalent to Samsung 301H EVO in optical, electrical and mechanical specification
- It is designed using Flip Chips for the best lifetime in harsh environments such as high humidity, high temperature and high sulfur or other corrosive conditions
- It is designed using short wavelength blue (~430nm) to match plant blue absorption
- High PPE > 3.0 umole/J @ CCT > 4000K
- Enables 3- and 5-step MacAdam ellipse custom binning kits
- RoHS compliant and lead free
- Multiple CCT and Mint Colors configurations for a wide range of horticulture applications

Benefits

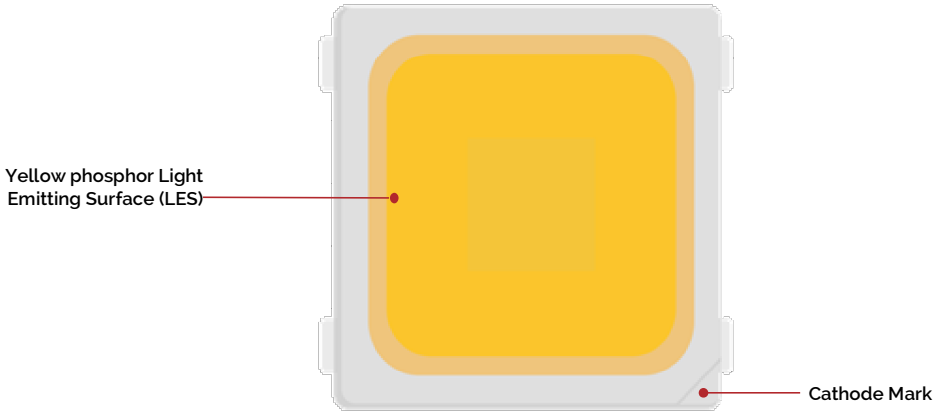
- Lower operating and manufacturing cost
- Ease of design and rapid go-to-market
- Uniform, consistent white light
- Reliable and constant white point
- Compliant with environmental standards
- Design flexibility
- Horticultural Lighting applications

Pb free RoHS

Contents

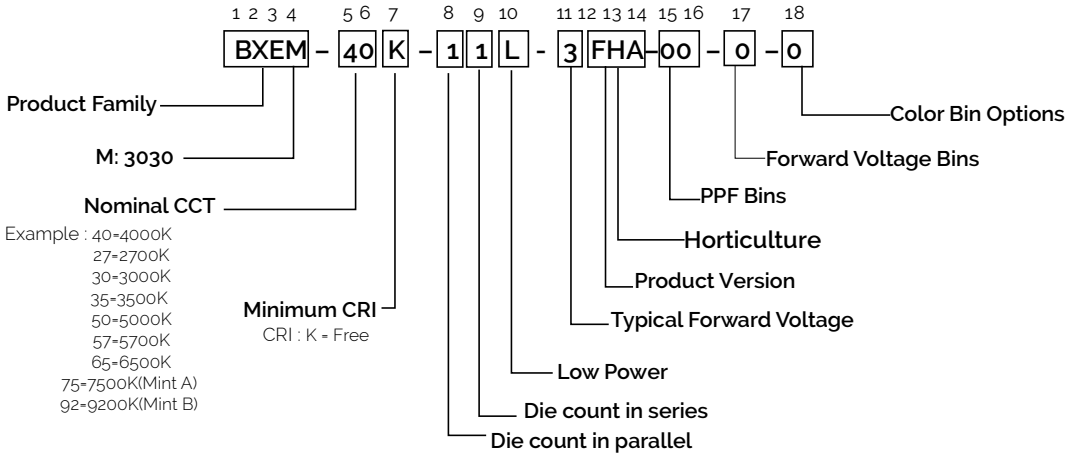
Product Feature Map

Bridgelux SMD LED products come in industry standard package sizes and follow ANSI binning standards. These LEDs are optimized for cost and performance, helping to ensure highly competitive system PPF per dollar performance while addressing the stringent efficacy and reliability standards required for modern lighting applications.



Product Nomenclature

The part number designation for Bridgelux SMD 3030 is explained as follows:



Product Selection Guide

The following product configurations are available:

Table 1: Selection Guide, Pulsed Measurement Data at 65mA (T_j=T_{sp}=25˚C)

Part Number[1,6]	Nominal CCT[2] (K)	CRI	Nominal Drive Current (mA)	Forward Voltage[4, 5] (V)			Typical PPF(umol/s)[4, 5]	Typical Power (W)	Typical PPE(umol/J)[4, 5]
				Min	Typical	Max			
BXEM-27K-11L-3FHA-00-0-0	2700	-	65	2.65	2.78	2.85	0.535	0.18	2.96
BXEM-30K-11L-3FHA-00-0-0	3000	-	65	2.65	2.78	2.85	0.540	0.18	2.99
BXEM-35K-11L-3FHA-00-0-0	3500	-	65	2.65	2.78	2.85	0.546	0.18	3.02
BXEM-40K-11L-3FHA-00-0-0	4000	-	65	2.65	2.78	2.85	0.546	0.18	3.02
BXEM-50K-11L-3FHA-00-0-0	5000	-	65	2.65	2.78	2.85	0.560	0.18	3.10
BXEM-57K-11L-3FHA-00-0-0	5700	-	65	2.65	2.78	2.85	0.560	0.18	3.10
BXEM-65K-11L-3FHA-00-0-0	6500	-	65	2.65	2.78	2.85	0.570	0.18	3.15
BXEM-75K-11L-3FHA-00-0-0 (Mint White A)	7500	-	65	2.65	2.78	2.85	0.570	0.18	3.15
BXEM-92K-11L-3FHA-00-0-0 (Mint White B)	9200	-	65	2.65	2.78	2.85	0.570	0.18	3.15

Table 2: Selection Guide, Pulsed Test Performance (T_{sp} = 85˚C)[7,8]

Part Number[1,6]	Nominal CCT[2] (K)	CRI[3]	Nominal Drive Current (mA)	Forward Voltage[4, 5] (V)			Typical PPF(umol/s)[4, 5]	Typical Power (W)	Typical PPE(umol/J)[4, 5]
				Min	Typical	Max			
BXEM-27K-11L-3FHA-00-0-0	2700	-	65	2.55	2.68	2.75	0.498	0.17	2.85
BXEM-30K-11L-3FHA-00-0-0	3000	-	65	2.55	2.68	2.75	0.508	0.17	2.91
BXEM-35K-11L-3FHA-00-0-0	3500	-	65	2.55	2.68	2.75	0.513	0.17	2.94
BXEM-40K-11L-3FHA-00-0-0	4000	-	65	2.55	2.68	2.75	0.513	0.17	2.94
BXEM-50K-11L-3FHA-00-0-0	5000	-	65	2.55	2.68	2.75	0.532	0.17	3.05
BXEM-57K-11L-3FHA-00-0-0	5700	-	65	2.55	2.68	2.75	0.532	0.17	3.05
BXEM-65K-11L-3FHA-00-0-0	6500	-	65	2.55	2.68	2.75	0.542	0.17	3.11
BXEM-75K-11L-3FHA-00-0-0 (Mint White A)	7500	-	65	2.55	2.68	2.75	0.542	0.17	3.11
BXEM-92K-11L-3FHA-00-0-0 (Mint White B)	9200	-	65	2.55	2.68	2.75	0.542	0.17	3.11

Notes for Tables 1 & 2:

1. The last 6 characters (including hyphens '-') refer to PPF bins, forward voltage bins, and color bin options, respectively. "00-0-0" denotes the full distribution of PPF, forward voltage, and color bin.
   Example: BXEM-40K-11L-3FHA-00-0-0 refers to the full distribution of PPF, forward voltage, and color within a 4000K 7-step ANSI standard CRI is -, 1 die configuration, low power, 2.78V typical forward voltage.
2. Product CCT is the nominal CCT at Tsp = 25˚C as defined by ANSI C78.377-2011.
3. Listed CRIs are "-" mean free.
4. Products tested under pulsed condition (10ms pulse width) at nominal drive current .
5. Bridgelux maintains a ±7.5% tolerance on luminous PPF measurements, ±0.1V tolerance on forward voltage measurements.
6. Refer to Table 6 and Table 7 for Bridgelux SMD 3030 Luminous PPF Binning and Forward Voltage Binning information.
7. Typical pulsed test performance values are provided as reference only and are not a guarantee of performance.
8. Typical performance is estimated based on operation under pulsed current with LED emitter mounted onto a heat sink with thermal interface

Performance at Commonly Used Drive Currents

Table 3: SMD 3030 LEDs specifications at nominal drive current are shown in Table 1 and Table 2. SMD 3030 may also be driven at other drive currents dependent on specific application design requirements. The performance at any drive current can be derived from the current vs. voltage characteristics shown in Figure 2 and the relative PPF vs. current characteristics shown in Figure 3. The performance at commonly used drive currents is summarized in Table 3.

Table 3: Performance at Commonly Used Drive Currents

Part Number	CRI	Drive Current (mA)	Typical Vf(V) Tsp = 25°C	Typical Power (W) Tsp = 25°C	Typical Pulsed PPF(umol/s)[1,2] T_{sp}=25°C	Typical Pulsed PPF (umol/s)[1,2] T_{sp}=85°C	Typical PPE (umol/J) Tsp = 25°C
BXEM-27K-11L-3FHA-00-0-0	-	5	2.63	0.01	0.040	0.038	3.07
		20	2.70	0.05	0.165	0.153	3.05
		65	**2.78**	**0.18**	**0.535**	**0.498**	**2.96**
		100	2.83	0.28	0.833	0.774	2.94
		150	2.89	0.43	1.201	1.117	2.77
		200	2.95	0.59	1.581	1.470	2.68
BXEM-30K-11L-3FHA-00-0-0	-	5	2.63	0.01	0.042	0.039	3.19
		20	2.70	0.05	0.167	0.157	3.09
		65	**2.78**	**0.18**	**0.540**	**0.508**	**2.99**
		100	2.83	0.28	0.835	0.785	2.95
		150	2.89	0.43	1.198	1.126	2.76
		200	2.95	0.59	1.578	1.483	2.67
BXEM-35K-11L-3FHA-00-0-0 BXEM-40K-11L-3FHA-00-0-0	-	5	2.63	0.01	0.042	0.040	3.23
		20	2.70	0.05	0.169	0.159	3.13
		65	**2.78**	**0.18**	**0.546**	**0.513**	**3.02**
		100	2.83	0.28	0.844	0.794	2.98
		150	2.89	0.43	1.211	1.139	2.79
		200	2.95	0.59	1.596	1.500	2.70
BXEM-50K-11L-3FHA-00-0-0 BXEM-57K-11L-3FHA-00-0-0	-	5	2.63	0.01	0.044	0.042	3.33
		20	2.70	0.05	0.175	0.166	3.24
		65	**2.78**	**0.18**	**0.560**	**0.532**	**3.10**
		100	2.83	0.28	0.865	0.822	3.06
		150	2.89	0.43	1.256	1.194	2.90
		200	2.95	0.59	1.670	1.586	2.83
BXEM-65K-11L-3FHA-00-0-0 BXEM-75K-11L-3FHA-00-0-0 (Mint White A) BXEM-92K-11L-3FHA-00-0-0 (Mint White B)	-	5	2.63	0.01	0.043	0.041	3.29
		20	2.70	0.05	0.177	0.168	3.28
		65	**2.78**	**0.18**	**0.570**	**0.542**	**3.15**
		100	2.83	0.28	0.880	0.836	3.11
		150	2.89	0.43	1.272	1.209	2.93
		200	2.95	0.59	1.700	1.615	2.88

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7.5% tolerance on PPF measurements.
3. Typical pulsed performance values are provided as reference only and are not a guarantee of performance.

Electrical Characteristics

Table 4: Electrical Characteristics

Part Number [1]	Drive Current (mA)	Forward Voltage (V) [1,2]			Typical Temperature Coefficient of Forward Voltage $\Delta V_f/\Delta T$ (mV/°C)	Typical Thermal Resistance Junction to Solder Point[3] $R_{j\text{-}sp}$ (°C/W)
		Minimum	Typical	Maximum		
BXEM-xxK-11L-3FHA-00-0-0	65	2.65	2.78	2.85	-1.03	7.5

Notes for Table 4:

1. Bridgelux maintains a tolerance of ± 0.1V on forward voltage measurements. Voltage minimum and maximum values at the nominal drive current are guaranteed by 100% test.
2. Products tested under pulsed condition (10ms pulse width) at nominal drive current where Tsp = 25°C.
3. Thermal resistance value was calculated using total electrical input power; optical power was not subtracted from input power.

Absolute Maximum Ratings

Table 5: Maximum Ratings

Parameter	Maximum Rating
LED Junction Temperature (T_j)	125˚C
Storage Temperature	-40˚C to +105˚C
Operating Solder Point Temperature (T_{Sp})	-40˚C to +105˚C
Soldering Temperature	260˚C or lower for a maximum of 10 seconds
Maximum Drive Current	200mA
Maximum Peak Pulsed Forward Current[1]	300mA
Maximum Reverse Voltage[2]	-
Moisture Sensitivity Rating	MSL 3
Electrostatic Discharge	8kV HBM. JEDEC-JS-001-HBM and JEDEC-JS-001-2012

Notes for Table 5:

1. Bridgelux recommends a maximum duty cycle of 10% and pulse width of 10 ms when operating LED SMD at maximum peak pulsed current specified. Maximum peak pulsed current indicate values where LED SMD can be driven without catastrophic failures,
2. Light emitting diodes are not designed to be driven in reverse voltage and will not produce light under this condition. no rating is provided.
3. Refer to the F.igure 7 for derating current according to Tsp.

Product Bin Definitions

Table 6 : lists the standard photometric PPF bins for Bridgelux SMD 3030 LEDs. Although several bins are listed, product availability in a particular bin varies by production run and by product performance. Not all bins are available in all CCTs.

Table 6: Luminous PPF Bin Definitions at 65mA, T_{sp}=25˚C

Part Number	Bin Code	Minimum	Maximum	Unit	Condition
BXEM-27K-11L-3FHA-00-0-0	1H	0.485	0.550	umol/s	I_F=65mA
BXEM-30K-11L-3FHA-00-0-0 BXEM-35K-11L-3FHA-00-0-0 BXEM-40K-11L-3FHA-00-0-0	1J	0.505	0.575		
BXEM-50K-11L-3FHA-00-0-0 BXEM-57K-11L-3FHA-00-0-0 BXEM-65K-11L-3FHA-00-0-0 BXEM-75K-11L-3FHA-00-0-0 (Mint White A)	1K	0.520	0.585		
BXEM-92K-11L-3FHA-00-0-0 (Mint White B)	1L	0.528	0.595		

Note for Table 6:

1. Bridgelux maintains a tolerance of ± 7.5% on luminous PPF measurements.

Table 7: Forward Voltage Bin Definition at 65mA, T_{sp}=25˚C

Bin Code	Minimum	Maximum	Unit	Condition
8	2.6	2.7	V	I_F=65mA
9	2.7	2.8		
A	2.8	2.9		

Note for Table 7:

1. Bridgelux maintains a tolerance of ± 0.1V on forward voltage measurements.

Product Bin Definitions

Table 8: MacAdam Ellipse Color Bin Definitions

CCT	Color Space	Center Point		Major Axis	Minor Axis	Ellipse Rotation Angle	Color Bin
		X	Y				
2700K	5 SDCM	0.4578	0.4101	0.0135	0.0070	53.70	E/F/G/H
3000K	5 SDCM	0.4338	0.403	0.0139	0.0068	53.22	E/F/G/H
3500K	5 SDCM	0.4073	0.3917	0.0155	0.0069	54.00	E/F/G/H
4000K	5 SDCM	0.3818	0.3797	0.0157	0.0067	53.72	E/F/G/H
5000K	5 SDCM	0.3447	0.3553	0.0137	0.0059	59.62	E/F/G/H
5700K	5 SDCM	0.3287	0.3417	0.0125	0.0053	59.10	E/F/G/H
6500K	5 SDCM	0.3123	0.3282	0.0120	0.0067	58.57	E/F/G/H

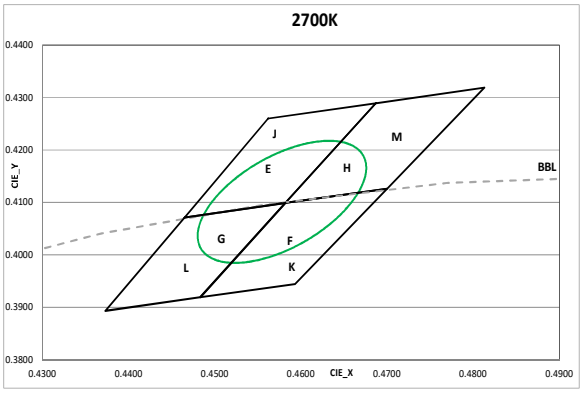
CCT	Color Bin	X1	Y1	X2	Y2	X3	Y3	X4	Y4
2700K	J	0.4562	0.4260	0.4465	0.4071	0.4582	0.4099	0.4687	0.4289
	K	0.4582	0.4099	0.4483	0.3919	0.4593	0.3944	0.4700	0.4126
	L	0.4465	0.4071	0.4373	0.3893	0.4483	0.3919	0.4582	0.4099
	M	0.4687	0.4289	0.4582	0.4099	0.4700	0.4126	0.4813	0.4319
3000K	J	0.4299	0.4165	0.4221	0.3984	0.4342	0.4028	0.4430	0.4212
	K	0.4342	0.4028	0.4259	0.3853	0.4373	0.3893	0.4465	0.4071
	L	0.4221	0.3984	0.4147	0.3814	0.4259	0.3853	0.4342	0.4028
	M	0.443	0.4212	0.4342	0.4028	0.4465	0.4071	0.4562	0.426
3500K	J	0.3996	0.4015	0.3941	0.3848	0.4080	0.3916	0.4146	0.4089
	K	0.408	0.3916	0.4017	0.3751	0.4147	0.3814	0.4221	0.3984
	L	0.3941	0.3848	0.3889	0.369	0.4017	0.3751	0.408	0.3916
	M	0.4146	0.4089	0.408	0.3916	0.4221	0.3984	0.4299	0.4165
4000K	J	0.3736	0.3874	0.3702	0.3722	0.3825	0.3798	0.3869	0.3958
	K	0.3825	0.3798	0.3783	0.3646	0.3898	0.3716	0.3950	0.3875
	L	0.367	0.3578	0.3783	0.3646	0.3825	0.3798	0.3702	0.3722
	M	0.3869	0.3958	0.3825	0.3798	0.3950	0.3875	0.4006	0.4044
5000K	J	0.3371	0.3490	0.3451	0.3554	0.3440	0.3427	0.3366	0.3369
	K	0.3451	0.3554	0.3533	0.362	0.3515	0.3487	0.3440	0.3427
	L	0.3376	0.3616	0.3463	0.3687	0.3451	0.3554	0.3371	0.349
	M	0.3463	0.3687	0.3551	0.376	0.3533	0.3620	0.3451	0.3554
5700K	J	0.3215	0.3350	0.3290	0.3417	0.3290	0.3300	0.3222	0.3243
	K	0.329	0.3417	0.3371	0.349	0.3366	0.3369	0.3290	0.3300
	L	0.3207	0.3462	0.329	0.3538	0.329	0.3417	0.3215	0.335
	M	0.329	0.3538	0.3376	0.3616	0.3371	0.3490	0.329	0.3417
6500K	J	0.3068	0.3113	0.3144	0.3186	0.3130	0.3290	0.3048	0.3207
	K	0.3144	0.3186	0.3221	0.3261	0.3213	0.3373	0.3130	0.3290
	L	0.3048	0.3207	0.313	0.329	0.3115	0.3391	0.3028	0.3304
	M	0.313	0.329	0.3213	0.3373	0.3205	0.3481	0.3115	0.3391
7500K Mint A	A	0.3064	0.4403	0.3236	0.4337	0.3104	0.3994	0.2933	0.4060
	B	0.2933	0.4060	0.3104	0.3994	0.2973	0.3651	0.2801	0.3717
9200K Mint B	C	0.2801	0.3717	0.2973	0.3651	0.2841	0.3307	0.2669	0.3373
	D	0.2669	0.3373	0.2841	0.3307	0.2709	0.2964	0.2538	0.3030

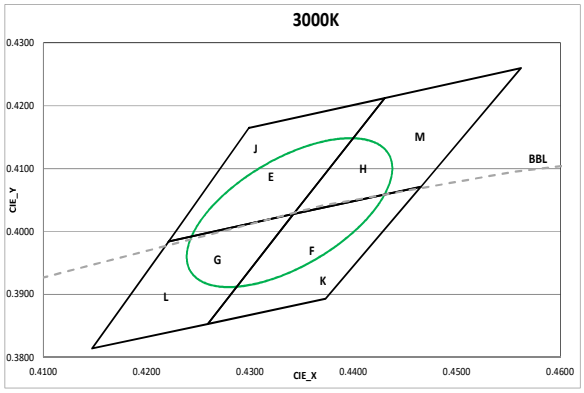
Notes for Table 8:

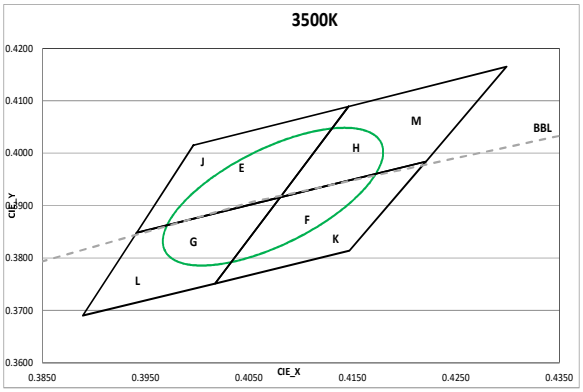
1. Color binning at T_{sp}=25°C unless otherwise specified.
2. Bridgelux maintains a tolerance of ± 0.007 on x and y color coordinates in the CIE 1931 color space.

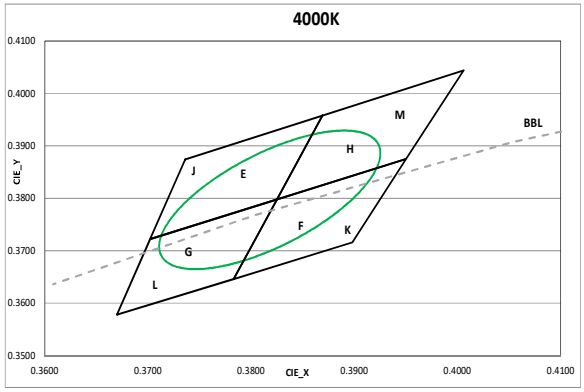
Product Bin Definitions

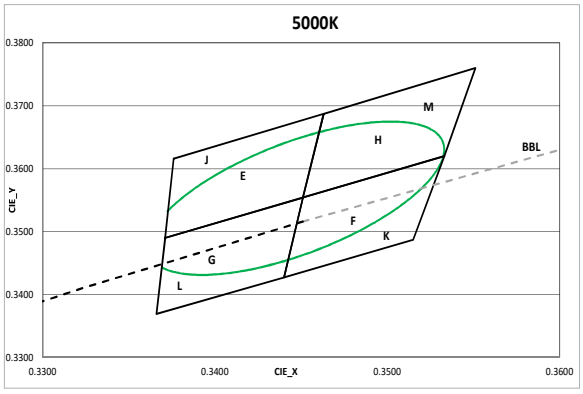
Figure 1: C.I.E. 1931 Chromaticity Diagram (8 Color Bin Structure, Targeted at T_{sp}=25°C)

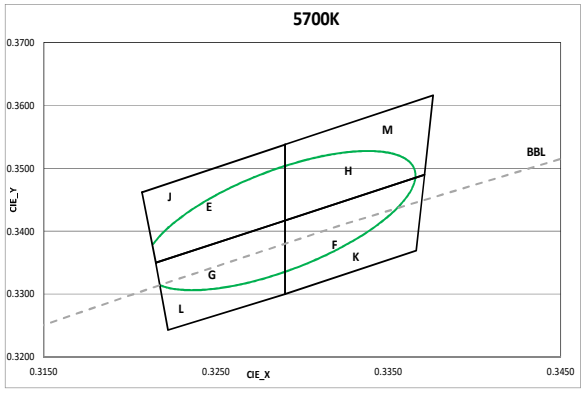






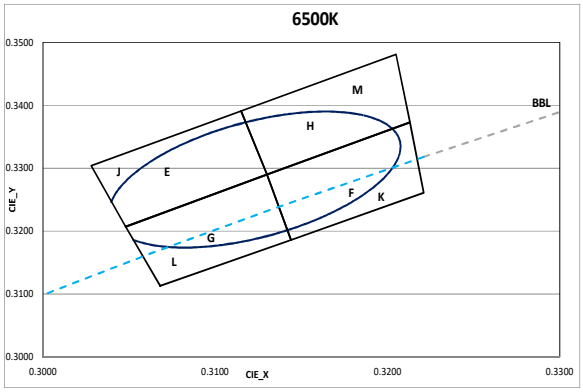


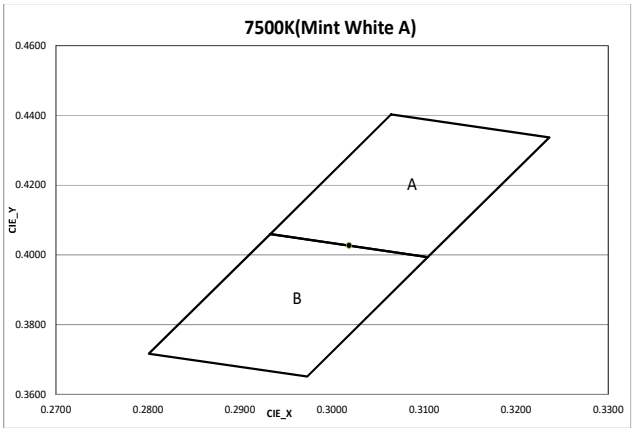


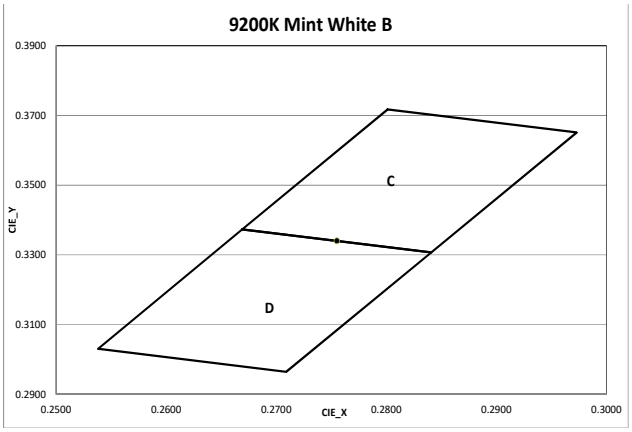


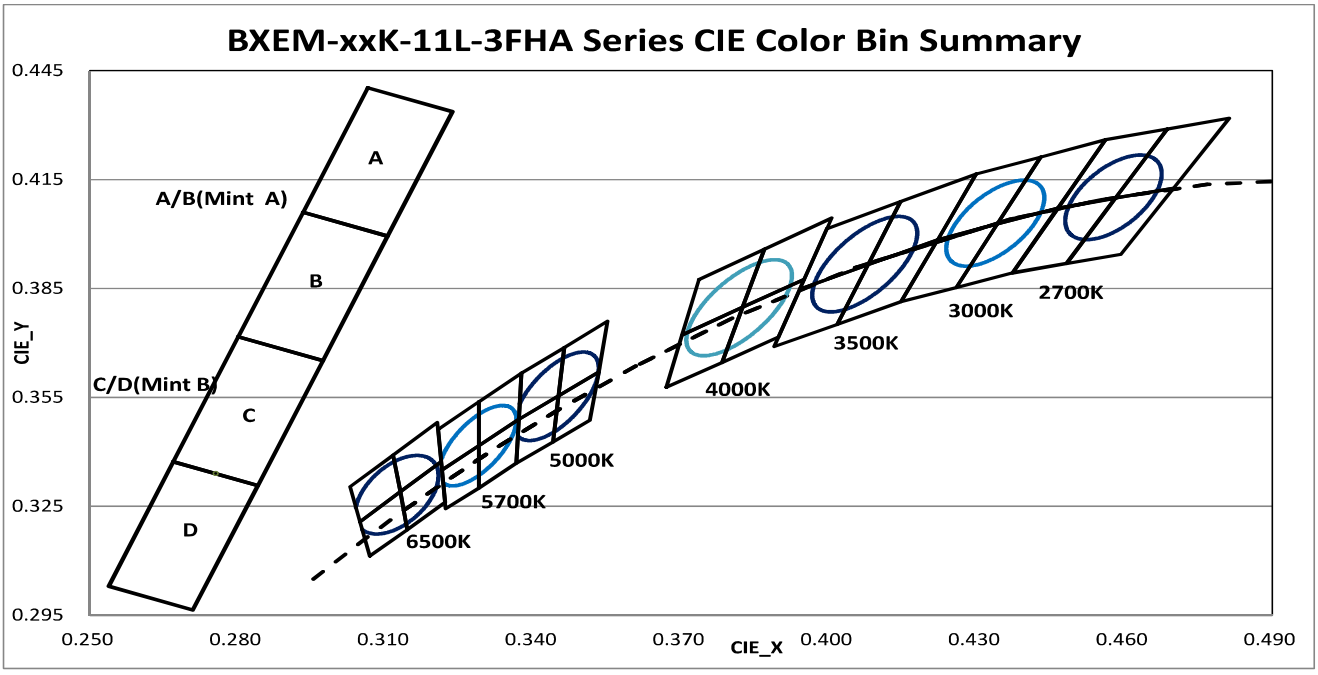
Product Bin Definitions

Figure 1: C.I.E. 1931 Chromaticity Diagram (8 or 2 Color Bin Structure, Targeted at T_{sp}=25°C)









Performance Curves

Figure 2: Drive Current vs. Forward Voltage (T_{sp}=25˚C)

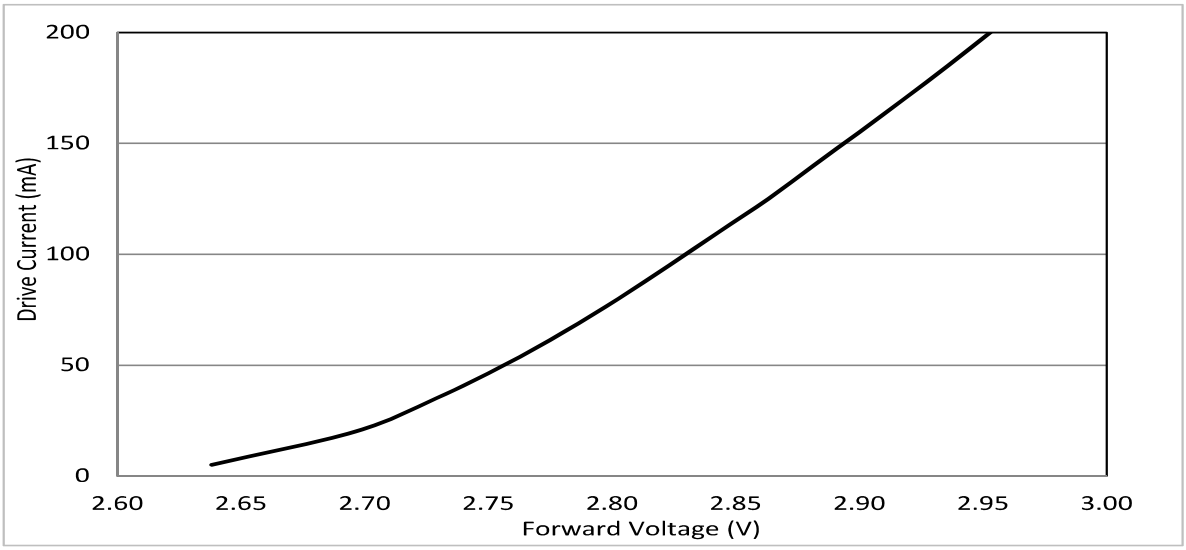
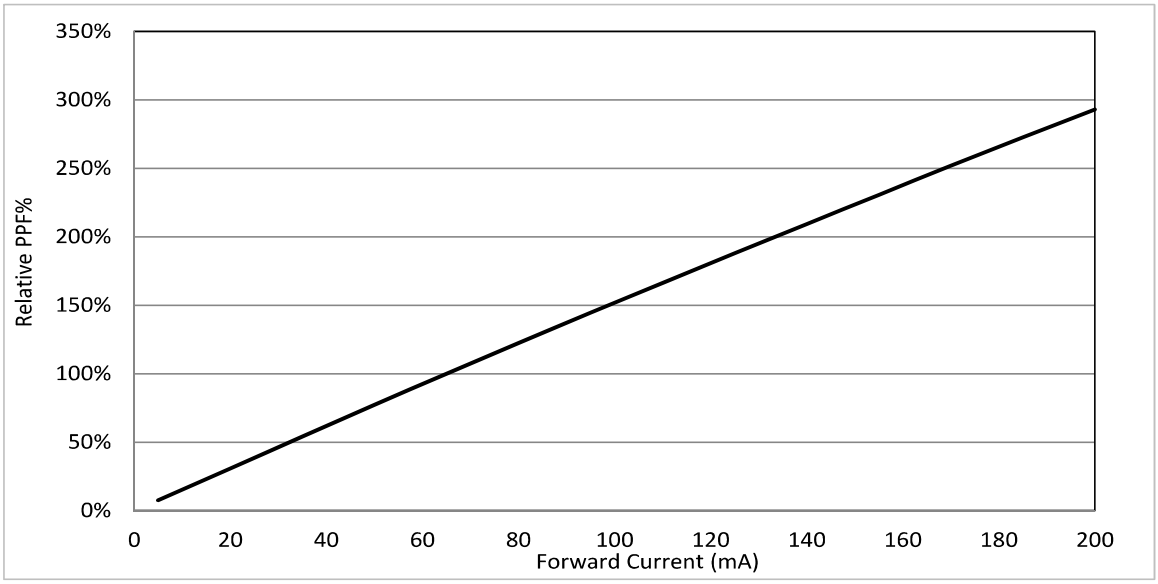


Figure 3: Relative Luminous PPF vs. Forward Current (T_{sp}=25˚C)



Performance Curves

Figure 4: Relative PPF vs. Solder Point Temperature

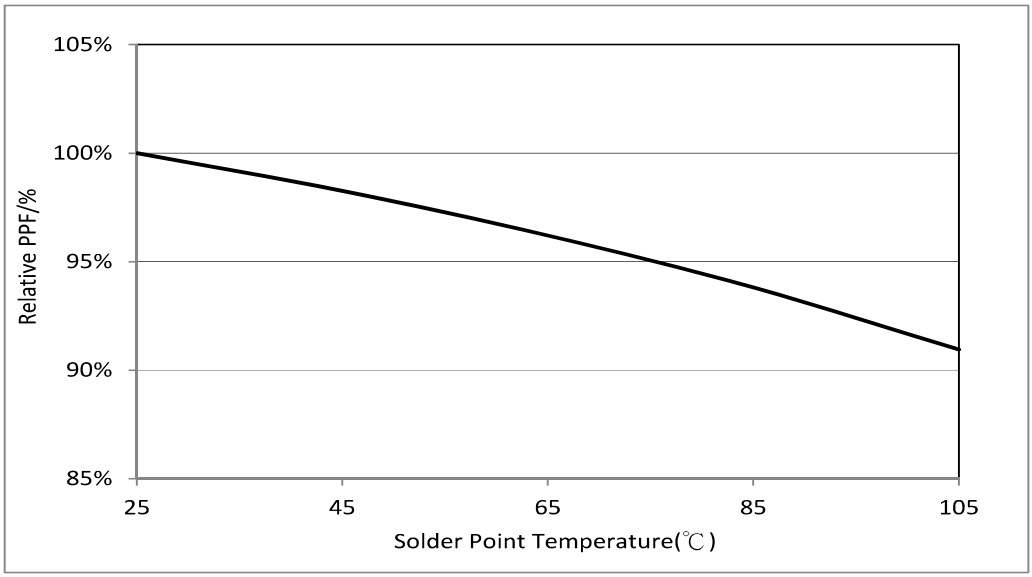
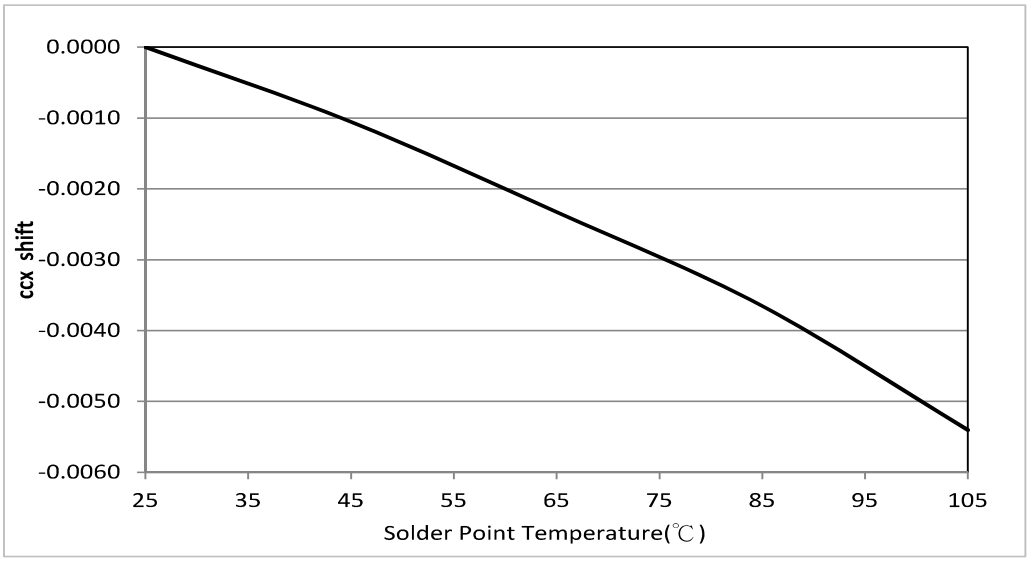


Figure 5: Typical ccx Shift vs. Solder Point Temperature

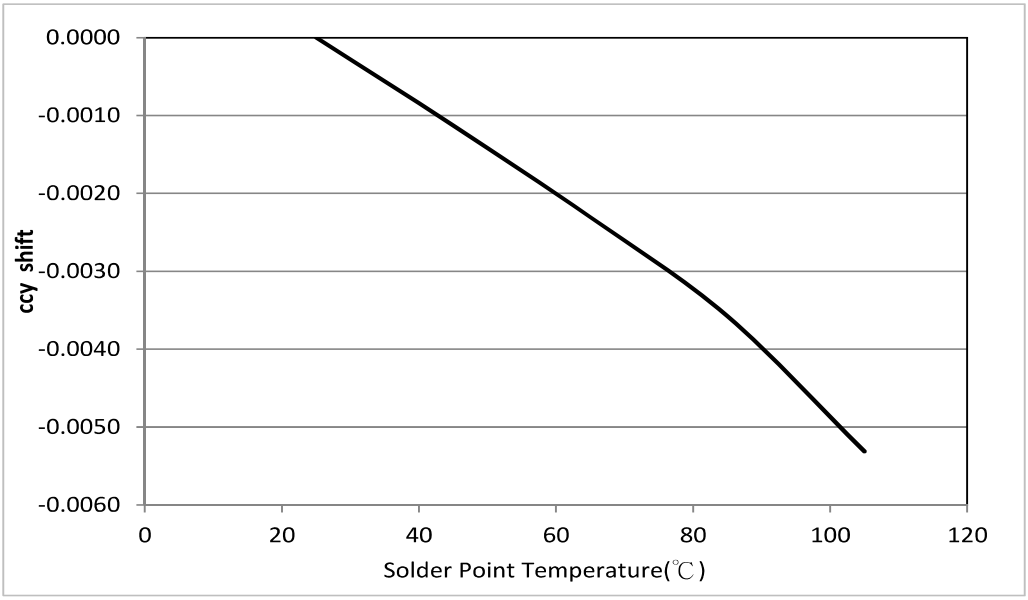


Notes for Figures 4 & 5:

1. Characteristics shown for neutral white based on 4000K .
2. For other color SKUs, the shift in color will vary. Please contact your Bridgelux Sales Representative for more information

Performance Curves

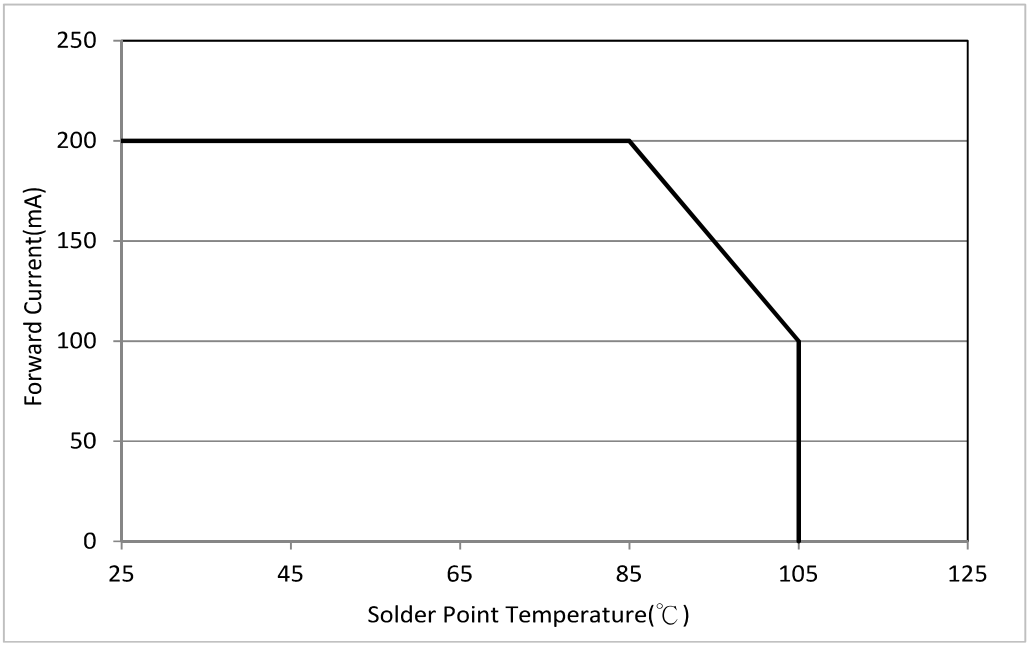
Figure 6: Typical ccy Shift vs. Solder Point Temperature



Notes for Figure 6:

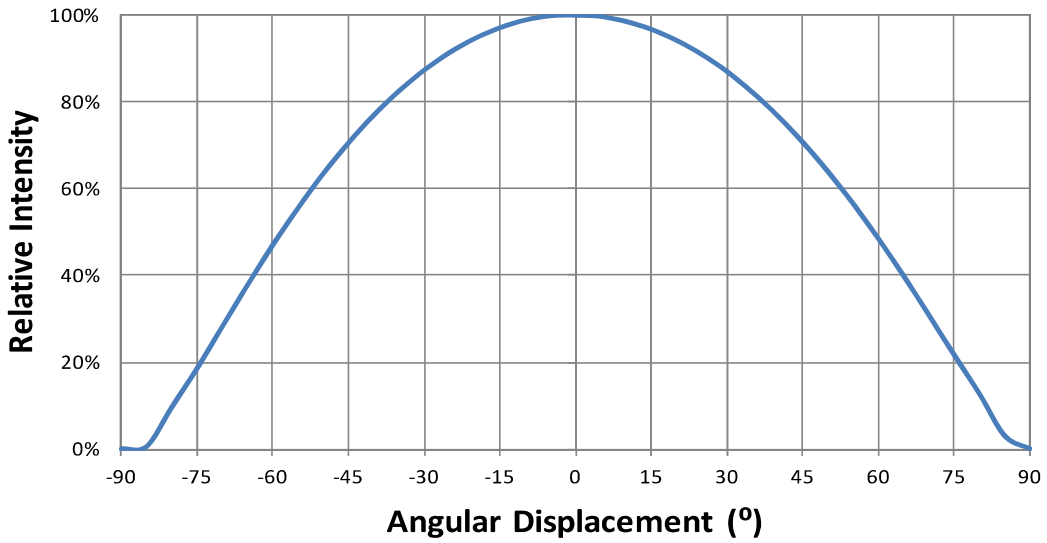
1. Characteristics shown for neutral white based on 4000K .
2. For other color SKUs, the shift in color will vary. Please contact your Bridgelux Sales Representative for more information.

Figure 7: Drive Current vs Solder Point Temperature



Typical Radiation Pattern

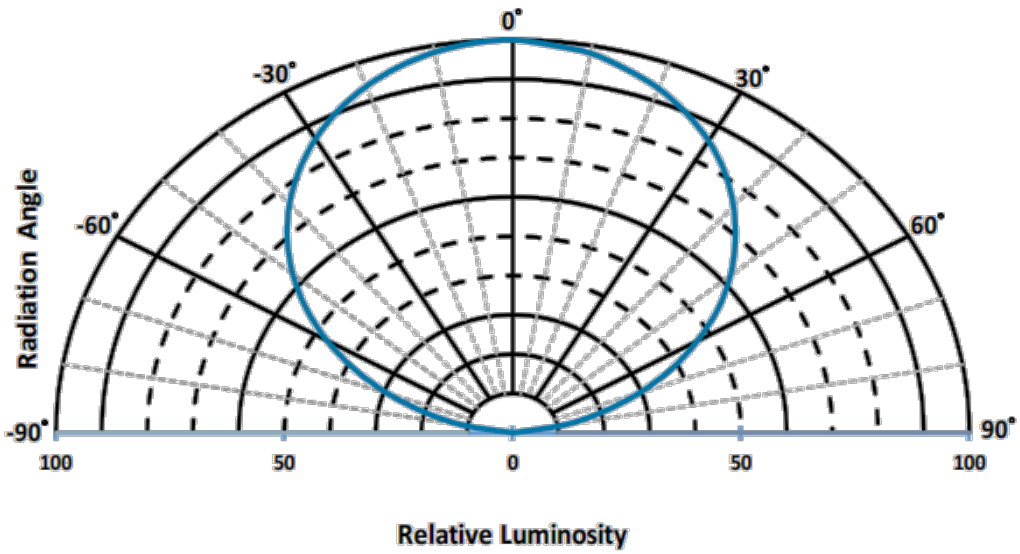
Figure 8: Typical Spatial Radiation Pattern at 65mA, T_{sp}=25˚C



Notes for Figure 8:

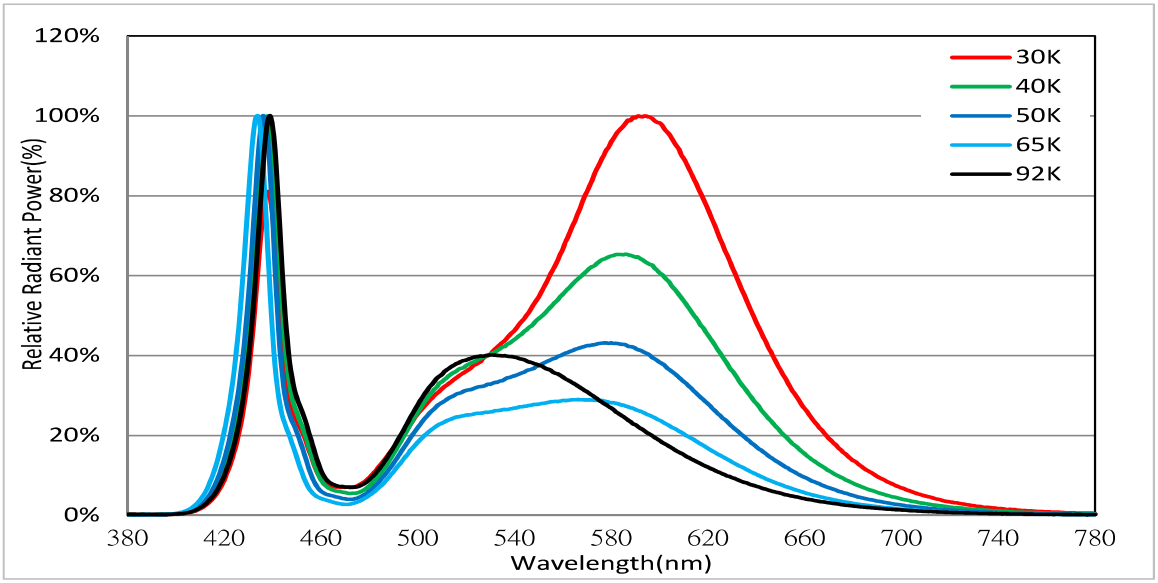
1. Typical viewing angle is 120°.
2. The viewing angle is defined as the off axis angle from the centerline where luminous intensity (Iv) is ½ of the peak value.

Figure 9: Typical Polar Radiation Pattern at 65mA, T_{sp}=25˚C



Typical Color Spectrum

Figure 10: Typical Color Spectrum

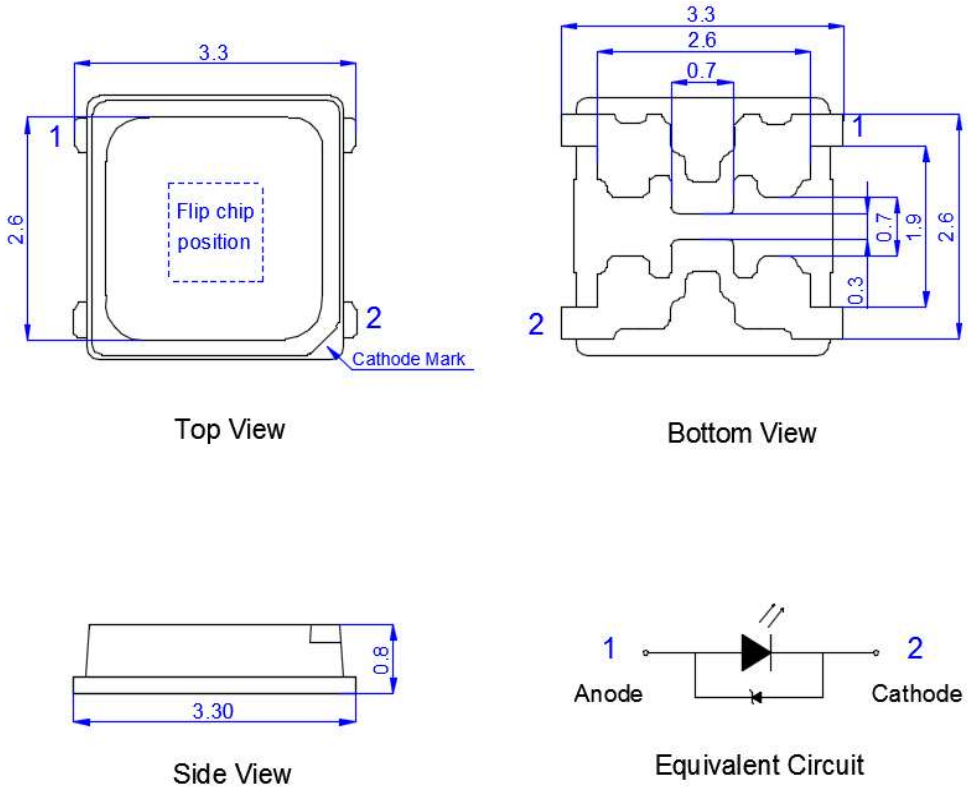


Notes for Figure 10:

1. Color spectra measured at nominal current for Tsp = 25°C
2. Color spectra shown for 3000K/4000K/5000K/6500K/9200K(Mint White B) products.

Mechanical Dimensions

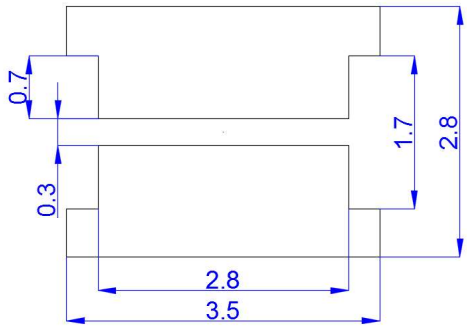
Figure 11: Drawing for SMD 3030



Notes for Figure 11:

1. Drawings are not to scale.
2. Drawing dimensions are in millimeters.
3. Unless otherwise specified, tolerances are ± 0.10mm.

Recommended PCB Soldering Pad Pattern



Reliability

Table 9: Reliability Test Items and Conditions

No .	Items	Reference Standard	Test Conditions	Drive Current	Test Duration	Units Failed/Tested
1	Moisture/Reflow Sensitivity	J-STD-020E	T_{sld} = 260°C, 10sec, Precondition: 60°C, 60%RH, 168hr	-	3 reflows	0/20
2	Low Temperature Storage	JESD22-A119	T_a=-40°C	-	1000 hours	0/20
3	High Temperature Storage	JESD22-A103D	T_a= 105°C	-	1000 hours	0/20
4	Low Temperature Operating Life	JESD22-A108D	T_a=-40°C	65mA	1000 hours	0/20
5	Temperature Humidity Operating Life	JESD22-A101C	T_{sp}=85°C, RH=85%	65mA	1000 hours	0/20
6	High Temperature Operating Life	JESD22-A108D	T_{sp}=85°C	200mA	1000 hours	0/20
7	Power switching	IEC62717:2014	T_{sp}= 85°C 30 sec on, 30 sec off	200mA	30000 cycles	0/20
8	Thermal Shock	JESD22-A106B	T_a=-40°C ~105°C; Dwell : 15min; Transfer: 10sec	-	200 cycles	0/20
9	Temperature Cycle	JESD22-A104E	T_a=-40°C ~100°C; Dwell at extreme temperature: 15min; Ramp rate < 105°C/min	-	200 cycles	0/20
10	Electrostatic Discharge	JS-001-2012	HBM, 8KV, 1.5kΩ, 100pF, Alternately positive or negative	-	-	0/20

Passing Criteria

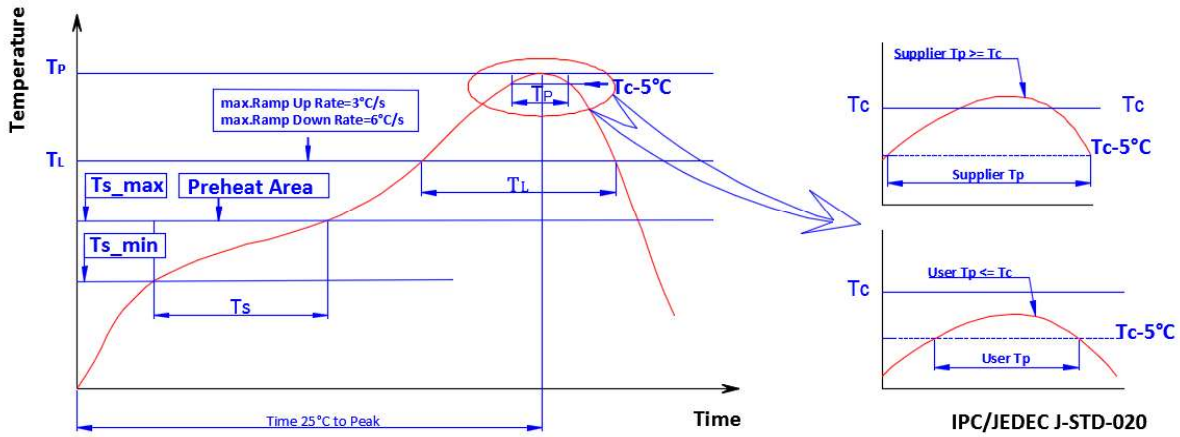
Item	Symbol	Test Condition	Passing Criteria
Forward Voltage	Vf	65mA	ΔVf<10%
Luminous Flux	Fv	65mA	ΔFv<30%
Chromaticity Coordinates	(x, y)	65mA	Δu'v'<0.007

Notes for Table 9:

1. Measurements are performed after allowing the LEDs to return to room temperature
2. T_{sld} : reflow soldering temperature; T_a : ambient temperature

Reflow Characteristics

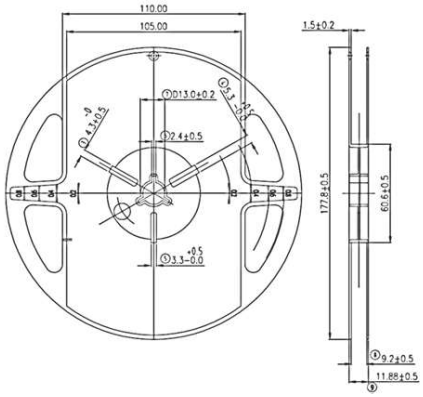
Figure 12 : Reflow Profile



Profile Feature	Lead - Assembly
Temperature Min. (Ts_min)	160°C
Temperature Max. (Ts_max)	205°C
Time (ts) from Ts_min to Ts_max	60-150 seconds
Ramp-Up Rate (TL to Tp)	3 °C/second
Liquidus Temperature (TL)	220 °C
Time (TL) Maintained Above TL	60-150 seconds
Peak Temp(Tp)	260 °C max.
Time (Tp) Within 5 °C of the Specified Classification Temperature (Tc)	25 seconds max.
Ramp-Down Rate (Tp to TL)	5 °C/second max.
Time 25 °C to Peak Temperature	10 minutes max.

Packaging

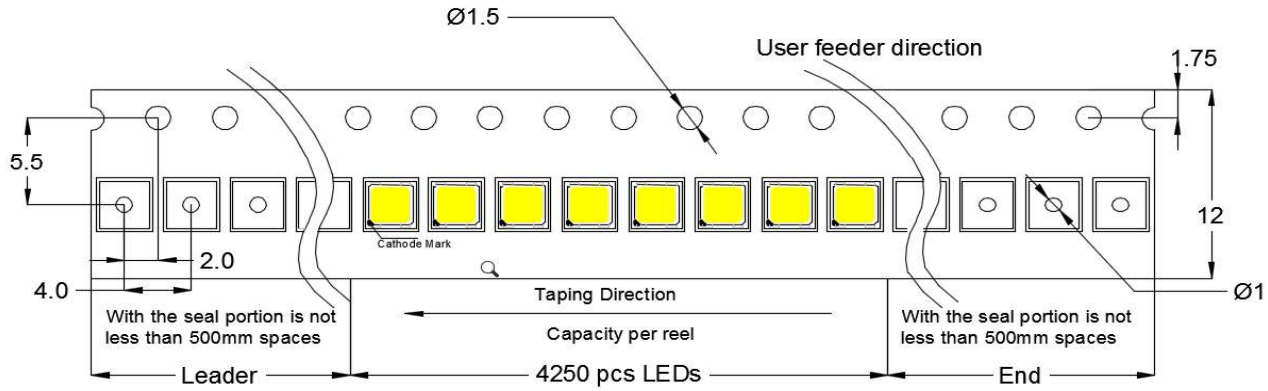
Figure 13: Emitter Reel Drawings



Note for Figure 13:

1. Drawings are not to scale. Drawing dimensions are in millimeters.

Figure 14: Emitter Tape Drawings

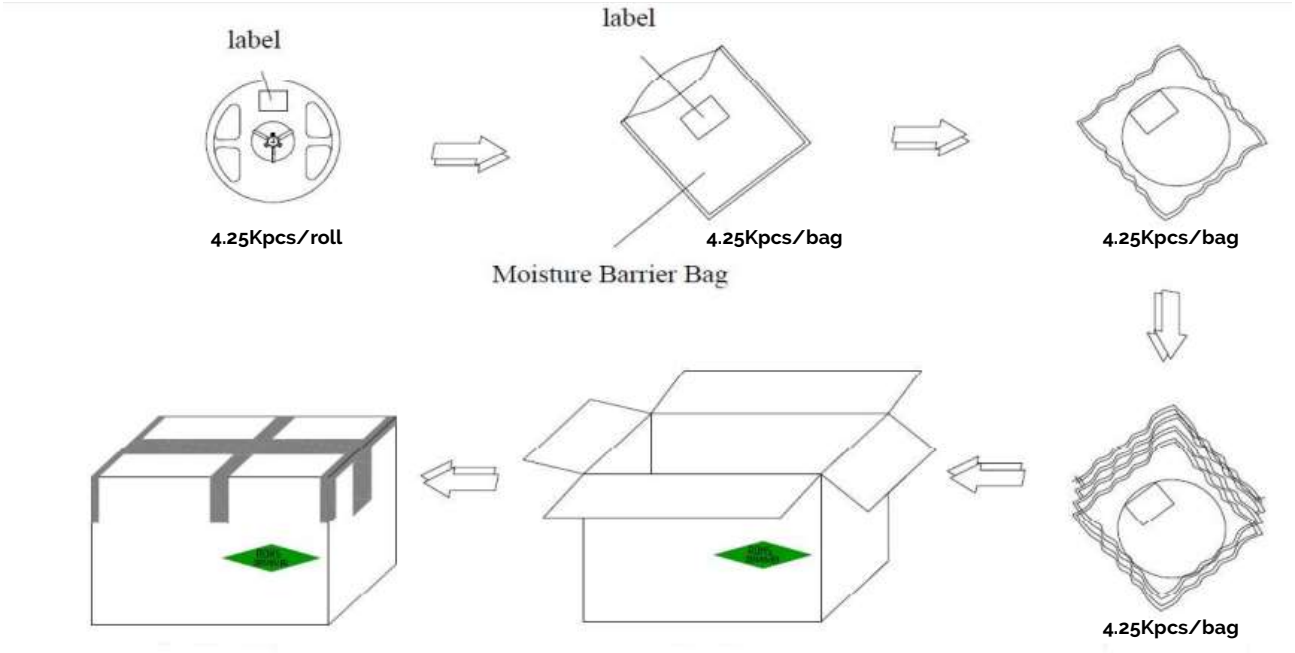


Note for Figure 14:

1. Drawings are not to scale. Drawing dimensions are in millimeters.

Packaging

Figure 15: Emitter Reel Packaging Drawings



Packing Categories	Packing List	LED Q'ty
Small cardboard Box	5 bags	21.25 Kpcs
Medium cardboard Box	25 bags	106.25 Kpcs

Note for Figure 15:

1. Drawings are not to scale.

Design Resources

Please contact your Bridgelux sales representative for assistance.

Precautions

CAUTION: CHEMICAL EXPOSURE HAZARD

Exposure to some chemicals commonly used in luminaire manufacturing and assembly can cause damage to the LED emitter. Please consult Bridgelux Application Note AN51 for additional information.

CAUTION: EYE SAFETY

Eye safety classification for the use of Bridgelux SMD LED emitter is in accordance with IEC specification EN62471: Photobiological Safety of Lamps and Lamp Systems. SMD LED emitters are classified as Risk Group 1 when operated at or below the maximum drive current. Please use appropriate precautions. It is important that employees working with LEDs are trained to use them safely.

CAUTION: RISK OF BURN

Do not touch the SMD LED emitter during operation. Allow the emitter to cool for a sufficient period of time before handling. The SMD LED emitter may reach elevated temperatures such that could burn skin when touched.

CAUTION

CONTACT WITH LIGHT EMITTING SURFACE (LES)

Avoid any contact with the LES. Do not touch the LES of the emitter or apply stress to the LES (yellow phosphor resin area). Contact may cause damage to the emitter

Optics and reflectors must not be mounted in contact with the LES (yellow phosphor resin area).

Disclaimers

MINOR PRODUCT CHANGE POLICY

The rigorous qualification testing on products offered by Bridgelux provides performance assurance. Slight cosmetic changes that do not affect form, fit, or function may occur as Bridgelux continues product optimization.

STANDARD TEST CONDITIONS

Unless otherwise stated, LED emitter testing is performed at the nominal drive current.

About Bridgelux: Bridging Light and Life™

At Bridgelux, we help companies, industries and people experience the power and possibility of light. Since 2002, we've designed LED solutions that are high performing, energy efficient, cost effective and easy to integrate. Our focus is on light's impact on human behavior, delivering products that create better environments, experiences and returns—both experiential and financial. And our patented technology drives new platforms for commercial and industrial luminaires.

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46410 Fremont Boulevard
Fremont, CA 94538 USA
Tel (925) 583-8400
Fax (925) 583-8401
www.bridgelux.com