



S35-W

HIGH POWER LED LIGHT SOURCE

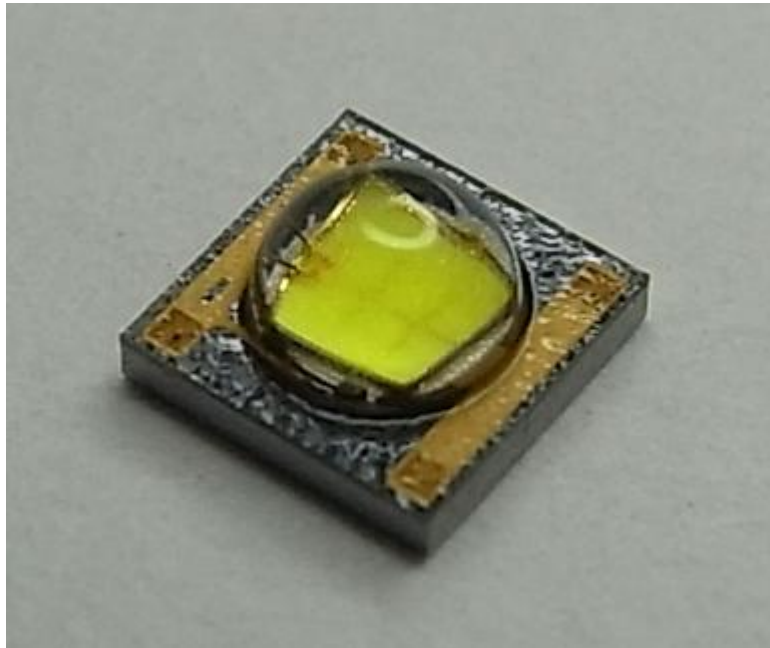
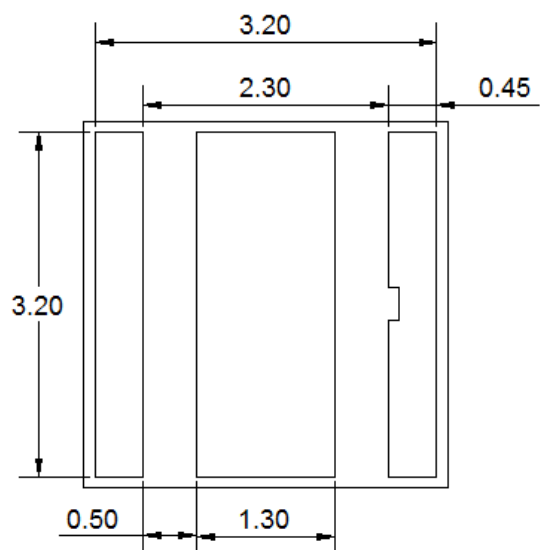
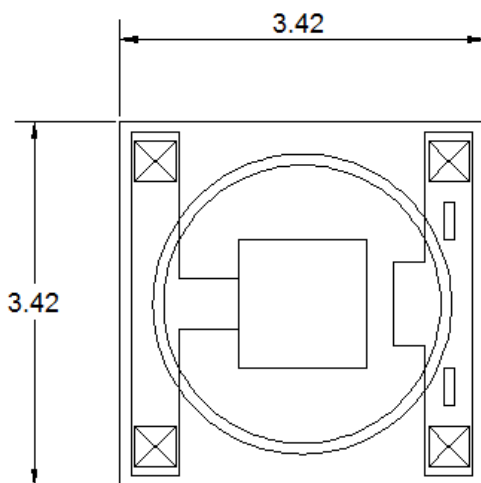
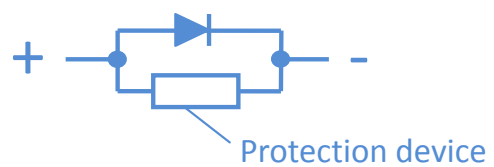
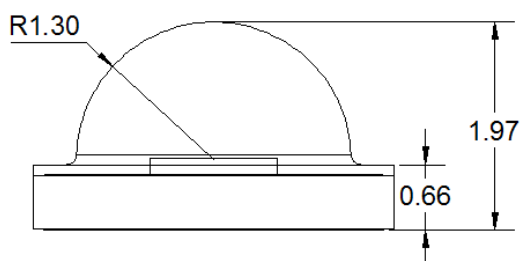
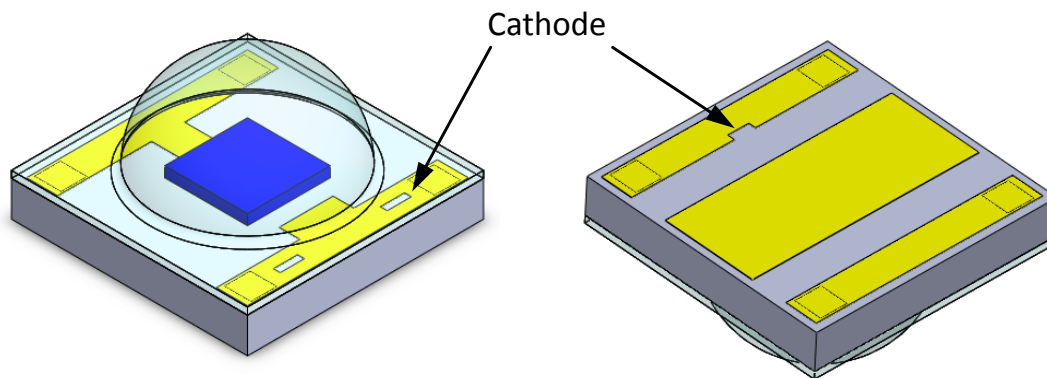


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Mechanical Dimensions



Unit : mm

Reminding: [1] Drawing is not to scale.

[2] General tolerance is ± 0.15 mm unless otherwise indicated.

Absolute Maximum Ratings

Characteristics	Maximum Rating	Unit
DC Forward Current	700	mA
Pulse Forward Current [1]	1000	mA
Reverse Voltage [2]	5	V
ESD Classification (HBM)	Class 2	
Operating Temperature [3]	-30~110	°C
Storage Temperature	-40~110	°C
Junction Temperature	125	°C

Reminding :

- [1] I_{FP} condition : Pulse width $\leq 10\text{msec.}$ and duty $\leq 1/10$.
- [2] This device doesn't design to be driven in reverse bias.
- [3] Please confirm the junction temperature is under maximum rating.

Electrical and Optical Characteristics under 700mA

Characteristics@700mA	Luminous Flux (lm)		Voltage (V)	
	Min.	Typ.	Min.	Typ.
Cool White (Q3*)	160	165	3.0	4.0
Cool White (Q4*)	170	175	3.0	4.0
Cool White (Q5*)	180	185	3.0	4.0
Warm White (P2*)	115	122	3.0	4.0
Warm White (P3*)	125	132	3.0	4.0
Warm White (P4*)	138	143	3.0	4.0

Reminding :

- [1] S35 maintains a tolerance of $\pm 10\%$ on flux measurement.
- [2] S35 maintains a tolerance of $\pm 0.1\text{V}$ on voltage measurement.
- [3] The * mark the flux bin under 350mA.

Optical Characteristics

Electrical and Optical Characteristics under 350mA

Characteristics@350mA	Luminous Flux (lm)		Voltage (V)	
	Min.	Typ.	Min.	Typ.
Cool White (Q3)	93.5	98	3.0	3.75
Cool White (Q4)	100	103	3.0	3.75
Cool White (Q5)	107	110	3.0	3.75
Warm White (P2)	69	72	3.0	3.75
Warm White (P3)	75	78	3.0	3.75
Warm White (P4)	81	83	3.0	3.75

Reminding :

- [1] S35 maintains a tolerance of $\pm 7\%$ on flux measurement.
- [2] S35 maintains a tolerance of $\pm 0.1V$ on voltage measurement.

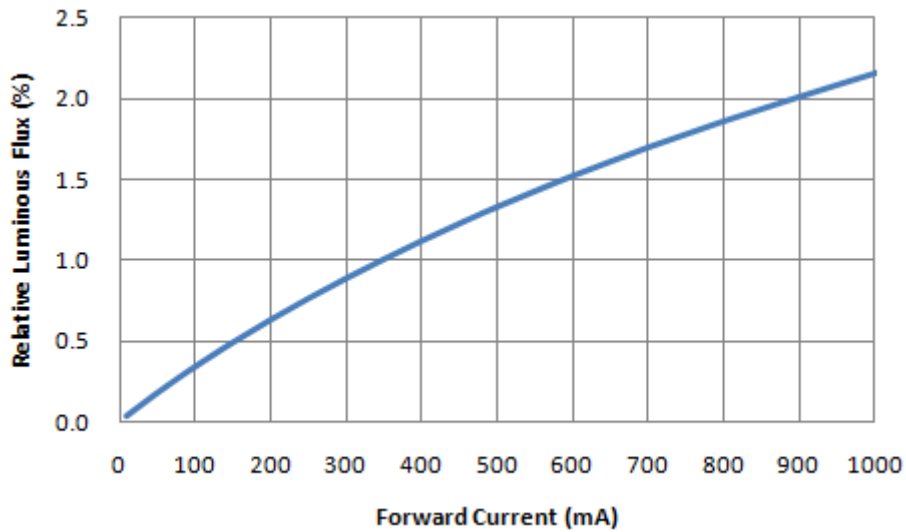
Typical Optical Characteristics under 350mA

Characteristics	CCT Range (K)	Output Flux (lm)	View Angle (Degree)
Cool White (Q3)	5000~8200 K	93.5~100	115
Cool White (Q4)	5000~8200 K	100~107	115
Cool White (Q5)	5000~8200 K	107~114	115
Warm White (P2)	2580~3700K	69~75	115
Warm White (P3)	2580~3700K	75~81	115
Warm White (P4)	2580~3700K	81~87	115

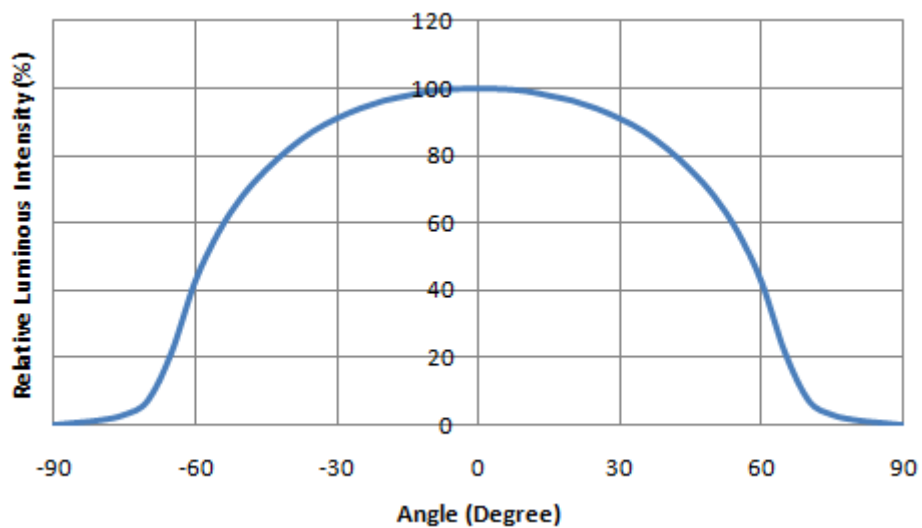
Reminding :

- [1] S35 maintains a tolerance of $\pm 7\%$ on flux measurement.
- [2] S35 maintains a tolerance of $\pm 0.1V$ on voltage measurement.
- [3] Typical CRI for Cool White (5000K ~ 8200K CCT) is 72.
- [4] Typical CRI for Warm White (2600K ~ 3700K CCT) is 80.

Typical Relative Luminous Flux v.s Forward Current

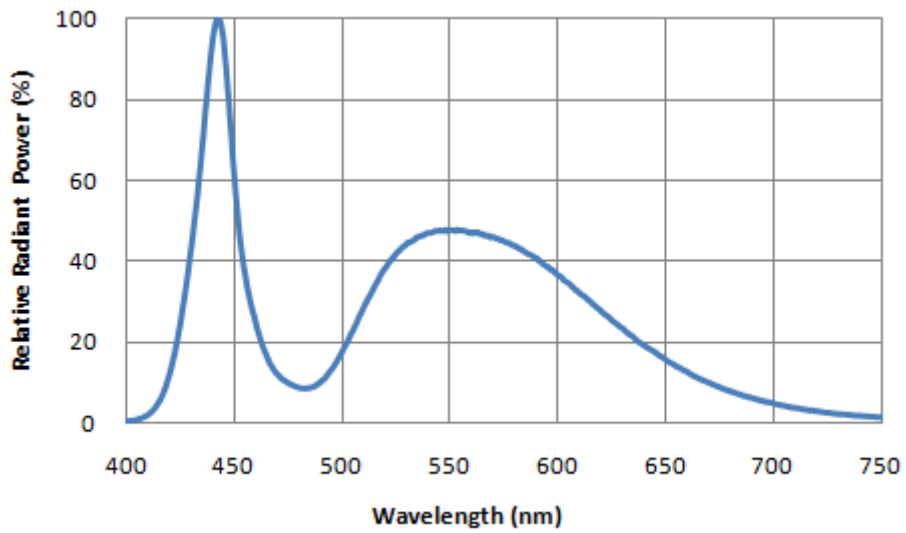


Typical Spatial Distribution

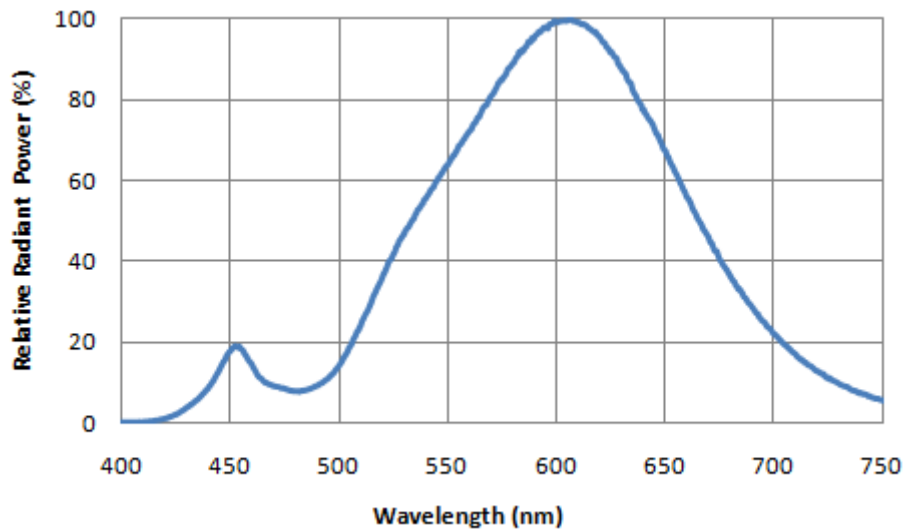


Typical Wavelength Spectrum Distribution

Cool White



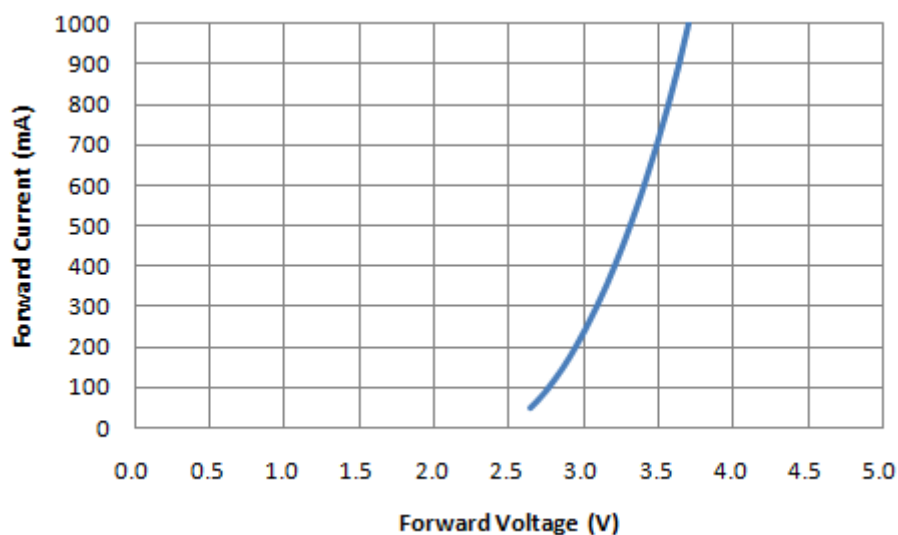
Warm White



Electrical Characteristics

Typical Characteristics	Symbol	Typical	Unit
Forward Current (@350mA)	V_F	3.2	V
Forward Current (@700mA)	V_F	3.4	V
Thermal Resistance (R_{j-b})	$R_{\theta_{j-b}}$	6	$^{\circ}\text{C}/\text{W}$
Temperature Coefficient of Forward Voltage	$\Delta V_F / \Delta T_j$	-3~-4	mV/ $^{\circ}\text{C}$

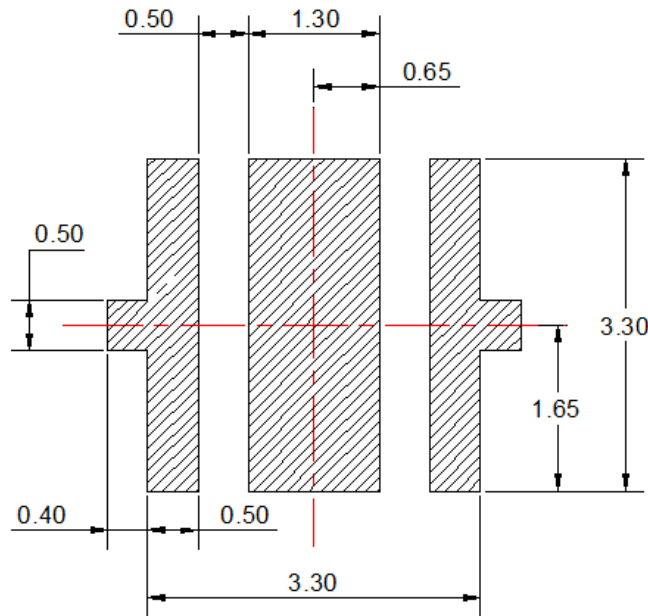
Typical Forward Current v.s Forward Voltage



Recommended Soldering Information

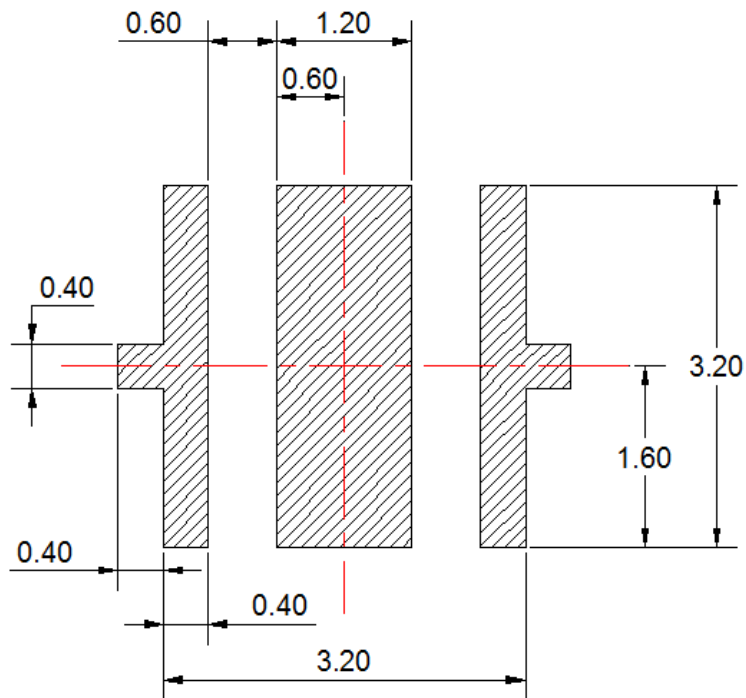
Recommended Soldering Pad Design

Unit : mm

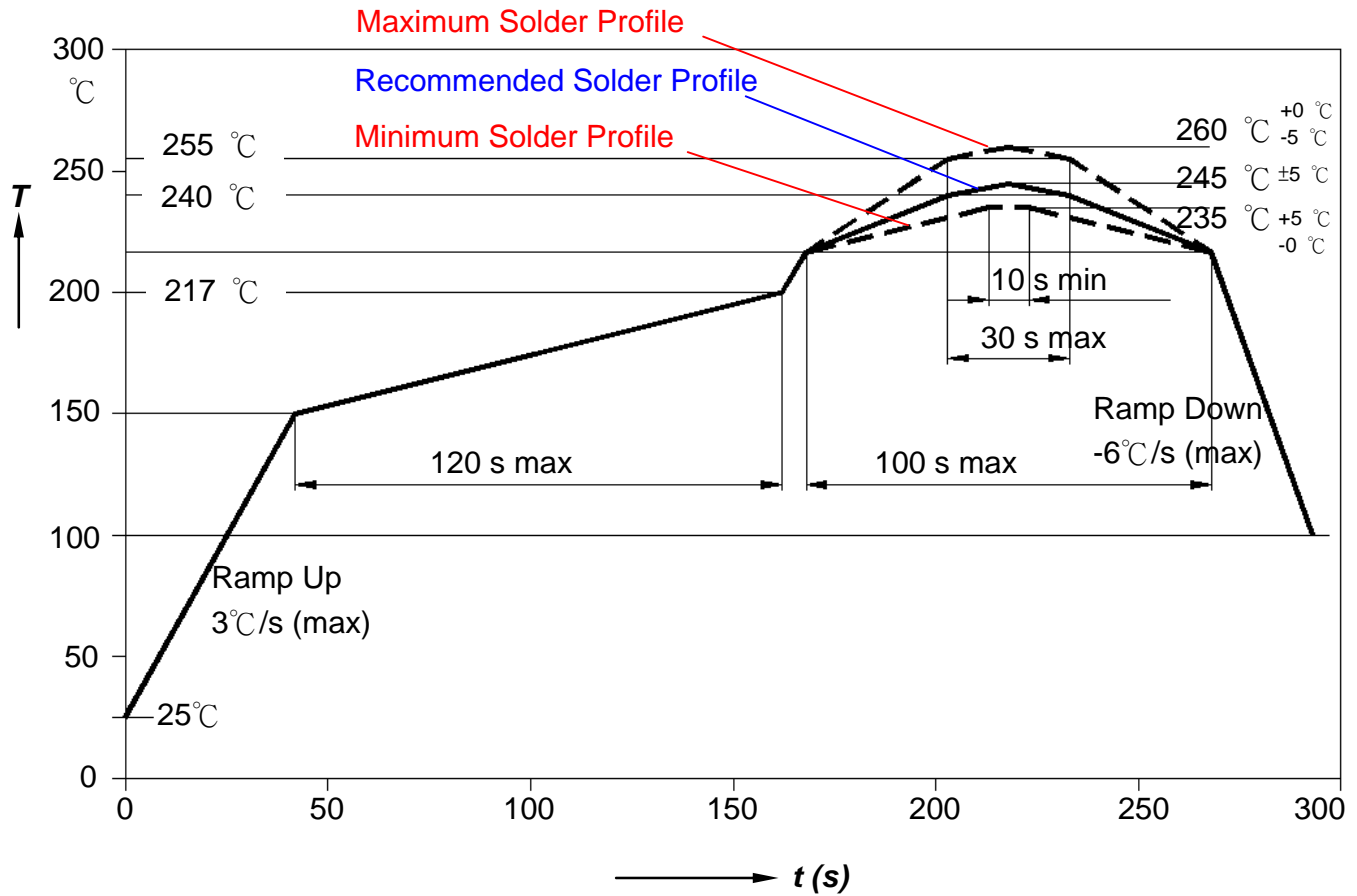


Recommended Stencil Pattern Design (Mark Area is Opening)

Unit : mm



Recommended Soldering Profile



Bin Rank

V_F Rank

Unit : V

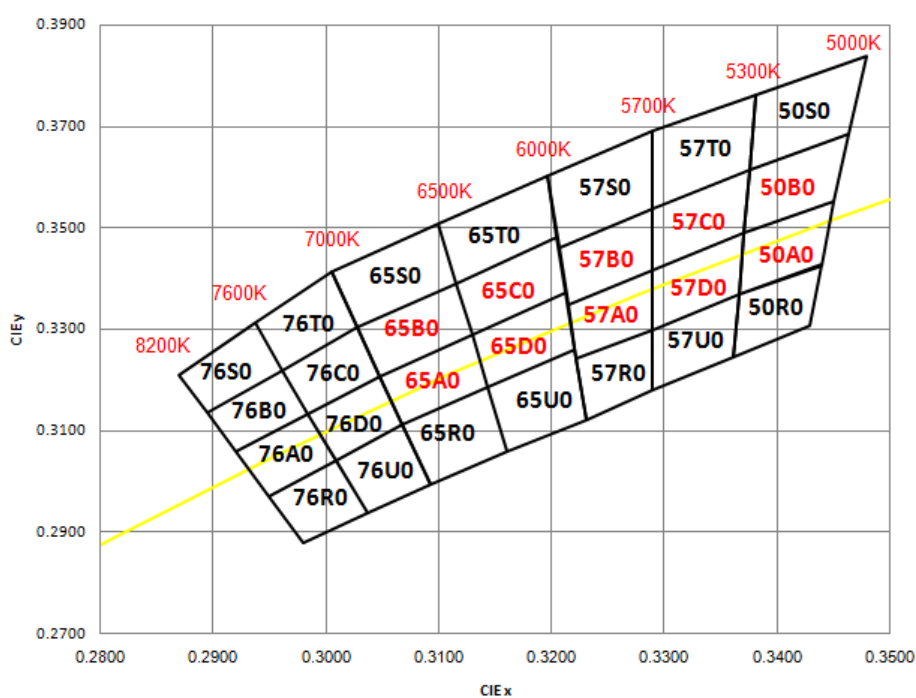
	Min.	Max.
V30	3.00	3.25
V32	3.25	3.50
V35	3.50	3.75

Flux Rank

Unit : lm

Bin Code	Min.	Max.
P2	69.0	75.0
P3	75.0	81.0
P4	81.0	87.0
Q2	87.0	93.5
Q3	93.5	100.0
Q4	100.0	107.0
Q5	107.0	114.0
R2	114.0	122.0

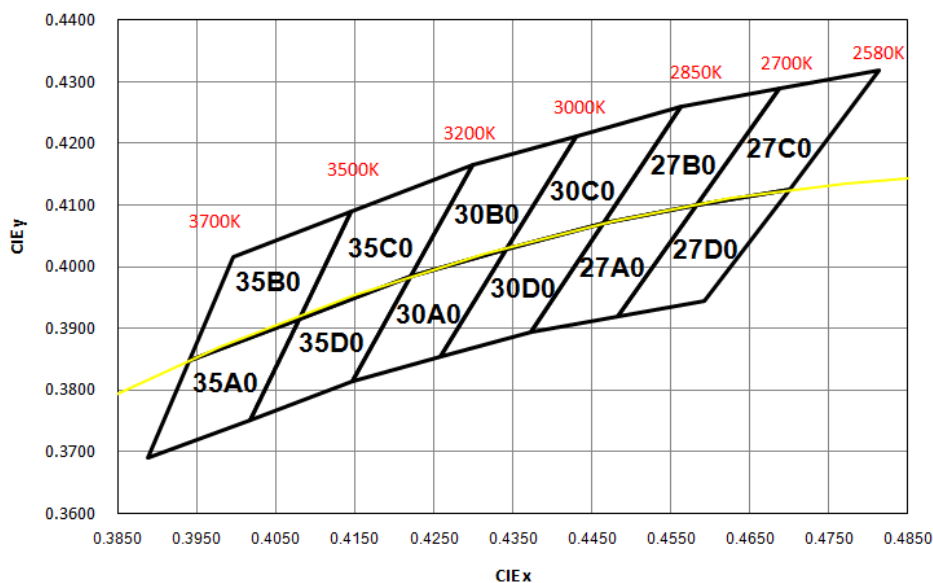
Color Rank (5000~8200K)



Region	x	y	Region	x	y
<u>76R0</u>	0.2980	0.2880	<u>65R0</u>	0.3068	0.3113
	0.2950	0.2970		0.3144	0.3186
	0.3009	0.3042		0.3161	0.3059
	0.3037	0.2937		0.3093	0.2993
<u>76A0</u>	0.2950	0.2970	<u>65A0</u>	0.3048	0.3207
	0.2920	0.3060		0.3130	0.3290
	0.2984	0.3133		0.3144	0.3186
	0.3009	0.3042		0.3068	0.3113
<u>76B0</u>	0.2920	0.3060	<u>65B0</u>	0.3028	0.3304
	0.2895	0.3135		0.3115	0.3391
	0.2962	0.3220		0.3130	0.3290
	0.2984	0.3133		0.3048	0.3207
<u>76S0</u>	0.2895	0.3135	<u>65S0</u>	0.3005	0.3415
	0.2870	0.3210		0.3099	0.3509
	0.2937	0.3312		0.3115	0.3391
	0.2962	0.3220		0.3028	0.3304
<u>76T0</u>	0.2962	0.3220	<u>65T0</u>	0.3099	0.3509
	0.2937	0.3312		0.3196	0.3602
	0.3005	0.3415		0.3205	0.3481
	0.3028	0.3304		0.3115	0.3391
<u>76C0</u>	0.2984	0.3133	<u>65C0</u>	0.3115	0.3391
	0.2962	0.3220		0.3205	0.3481
	0.3028	0.3304		0.3213	0.3373
	0.3048	0.3207		0.3130	0.3290
<u>76D0</u>	0.2984	0.3133	<u>65D0</u>	0.3130	0.3290
	0.3048	0.3207		0.3213	0.3373
	0.3068	0.3113		0.3221	0.3261
	0.3009	0.3042		0.3144	0.3186
<u>76U0</u>	0.3037	0.2937	<u>65U0</u>	0.3144	0.3186
	0.3009	0.3042		0.3221	0.3261
	0.3068	0.3113		0.3231	0.3120
	0.3093	0.2993		0.3161	0.3059

Region	x	y	Region	x	y
<u>57R0</u>	0.3222	0.3243	<u>50R0</u>	0.3366	0.3369
	0.3290	0.3300		0.3440	0.3428
	0.3290	0.3180		0.3429	0.3307
	0.3231	0.3120		0.3361	0.3245
<u>57A0</u>	0.3215	0.3350	<u>50A0</u>	0.3371	0.3490
	0.3290	0.3417		0.3451	0.3554
	0.3290	0.3300		0.3440	0.3427
	0.3222	0.3243		0.3366	0.3369
<u>57B0</u>	0.3207	0.3462	<u>50B0</u>	0.3376	0.3616
	0.3290	0.3538		0.3463	0.3687
	0.3290	0.3417		0.3451	0.3554
	0.3215	0.3350		0.3371	0.3490
<u>57S0</u>	0.3196	0.3602	<u>50S0</u>	0.3381	0.3762
	0.3290	0.3690		0.3480	0.3840
	0.3290	0.3538		0.3463	0.3687
	0.3207	0.3462		0.3376	0.3616
<u>57T0</u>	0.3290	0.3690			
	0.3381	0.3762			
	0.3376	0.3616			
	0.3290	0.3538			
<u>57C0</u>	0.3290	0.3538			
	0.3376	0.3616			
	0.3371	0.3490			
	0.3290	0.3417			
<u>57D0</u>	0.3290	0.3417			
	0.3371	0.3490			
	0.3366	0.3369			
	0.3290	0.3300			
<u>57U0</u>	0.3290	0.3300			
	0.3366	0.3369			
	0.3361	0.3245			
	0.3290	0.3180			

Color Rank (2580~3700K)



Region	x	y	Region	x	y
35A0	0.2980	0.2880	30C0	0.3068	0.3113
	0.2950	0.2970		0.3144	0.3186
	0.3009	0.3042		0.3161	0.3059
	0.3037	0.2937		0.3093	0.2993
35B0	0.2950	0.2970	30D0	0.3048	0.3207
	0.2920	0.3060		0.3130	0.3290
	0.2984	0.3133		0.3144	0.3186
	0.3009	0.3042		0.3068	0.3113
35C0	0.2920	0.3060	27A0	0.3028	0.3304
	0.2895	0.3135		0.3115	0.3391
	0.2962	0.3220		0.3130	0.3290
	0.2984	0.3133		0.3048	0.3207
35D0	0.2895	0.3135	27B0	0.3005	0.3415
	0.2870	0.3210		0.3099	0.3509
	0.2937	0.3312		0.3115	0.3391
	0.2962	0.3220		0.3028	0.3304
30A0	0.2962	0.3220	27C0	0.3099	0.3509
	0.2937	0.3312		0.3196	0.3602
	0.3005	0.3415		0.3205	0.3481
	0.3028	0.3304		0.3115	0.3391
30B0	0.2984	0.3133	27D0	0.3115	0.3391
	0.2962	0.3220		0.3205	0.3481
	0.3028	0.3304		0.3213	0.3373
	0.3048	0.3207		0.3130	0.3290