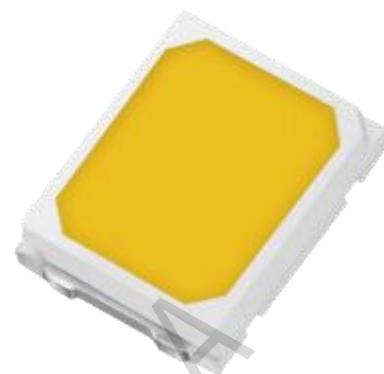


PART NUMBER:
H28W-*11A-YJ3G**

2835 UHE-A (0.2-0.5W)

HXY 2835 Series Product is a collection of compact devices that allows for design freedom and provides a superior overall system solution when a project requires high lumen output and good efficacy. With an industry standard footprint, the HXY 2835 Series is the perfect upgrade for other 2835 products and other common mid power offerings. The HXY 2835 Series is color targeted for application needs and delivers efficacy and reliability for a variety of applications. It is available in three product offerings, HXY 2835 HE for higher output, HXY 2835 HP for lower output, and HXY 2835 HS for Special product design.

Product Data Summary

Product	Power Class (W)	Test Temperature (°C)	Test Current (mA)	Typical Forward Voltage	3000K,80CRI		5000K,80CRI		Maximum Current (mA)
					Typical Flux	Typical Efficacy	Typical Flux	Typical Efficacy	
H28W-***11A-YJ3G	0.2W	25 °C	65mA	2.72V	36.2lm	193 LPW	38.5lm	218 LPW	150mA
	0.05W	25 °C	20mA	2.64V	11.5lm	218 LPW	12.3lm	233 LPW	

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超高光效系列 UHE-A

Product Code Information

1	2	3	-	4	5	6	7	-	8	9	10
H	28	W	-	50	8	11	A	-	Y	J	3 E

Digit	PKG Information	Code	Specification
1	Company Code	H	HENGXINGYUAN(HXY)
2	Shape Code	28 30	28:2835 30:3030
3	Color	W	White
4	CCT(K)	22 27 30 40 50 57 65 00	22:2200K 27:2700K 30:3000K 40:4000K 50:5000K 57:5700K 65:6500K 00:Color led
5	CRI	7 8 9 A B C 0	70:Min.70 80:Min.80 90:Min.90 A:Min.95 B:Min.97 C:Full Spectrum 0:No CRI
6	Serial-parallel mode	12	1-string-2 combination
7	Support Material	A B C	A:PPA B:PCT C:EMC
8 9 10	Internal Code	--	Internal Code

Product Bin and Labeling Definitions

HXY 2835 Series LEDs are labeled using digits alphanumeric CAT code following the format below:

AA-BB-CC-XX

Where:

- AA -- designates luminous flux bin (example: 3C=34 to 36 lm)
- BB -- designates correlated color bin (example: 503 for 5000K parts)
- CC -- designates forward voltage bin (example: QC=2.8 to 2.9V)
- XX -- Standard Current

Therefore, a HXY 2835 HP-B LED with a lumen range of 34 to 36 lm, color bin of 503, Standard Current of 60mA and a forward voltage range of 2.8 to 2.9V has the following CAT code:

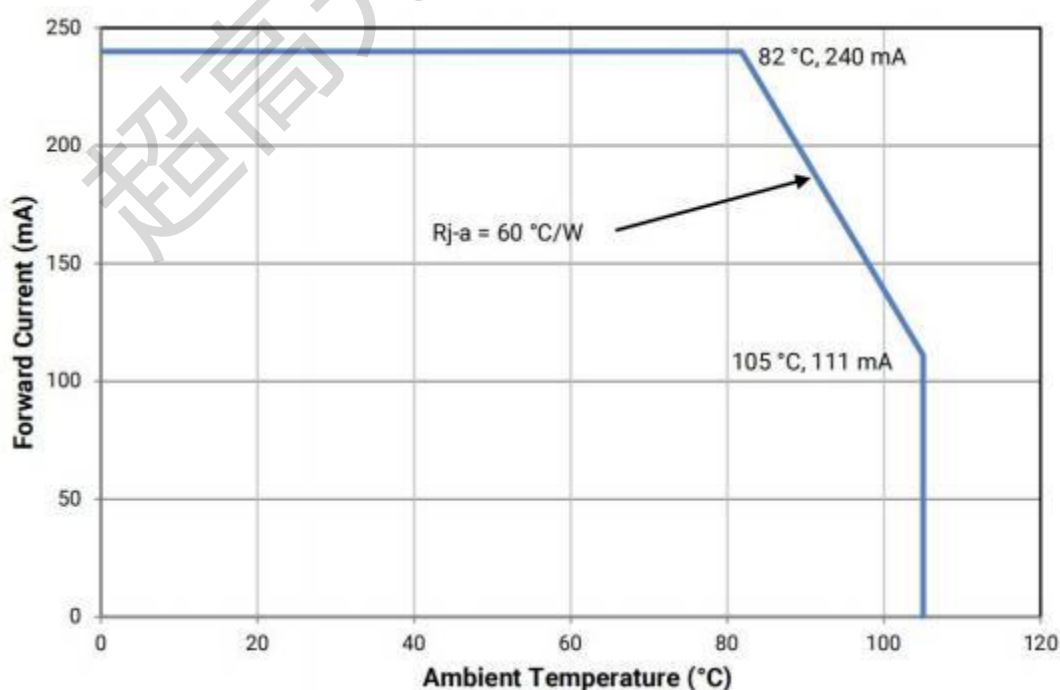
3C-503-QC-60

Optical Characteristics

Characteristics	Unit	Minimum	Typical	Maximum
Thermal resistance, junction to solder point	°C/W		21	
Viewing angle (FWHM)	degrees		120	
Temperature coefficient of voltage	mV/°C		-1.7	
ESD withstand voltage	V		2000	
DC forward current	mA			65
Reverse voltage	V			5
Forward voltage (@ 65mA, 25 °C)	V		2.72	2.8
LED junction temperature	°C			125
Operating temperature	°C	-40		105

Operating Limits

The maximum forward current is determined by the thermal resistance between the LED junction and ambient.



Performance Characteristics

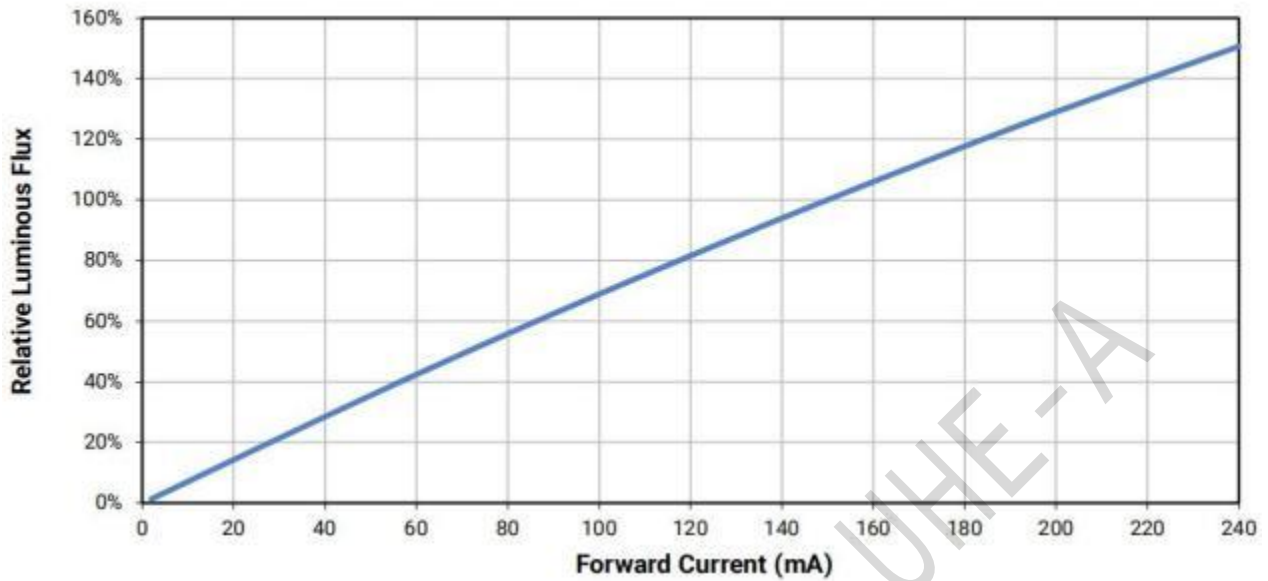
Product performance of HXY 2835 UHE-A at specified test conditions.

Product	Nominal CCT	Min. CRI	Luminous Flux(lm)		Typical Luminous Efficacy (lm/W)	Test Current (mA)	Part Number
			Minimum	Typical			
2835 UHE-A 3V 65mA	2700K	70	37	38.1	216	65	H28W-27711A-YJ3G
	3000K	70	37	38.5	218	65	H28W-30711A-YJ3G
	4000K	70	34	41	232	65	H28W-40711A-YJ3G
	5000K	70	34	41	232	65	H28W-50711A-YJ3G
	5700K	70	34	41	232	65	H28W-57711A-YJ3G
	6500K	70	34	41	232	65	H28W-65711A-YJ3G
	2200K	80	33	33.8	190	65	H28W-22811A-YJ3G
	2700K	80	34	35.4	203	65	H28W-27811A-YJ3G
	3000K	80	31.2	36.2	205	65	H28W-30811A-YJ3G
	4000K	80	37	38.5	218	65	H28W-40811A-YJ3G
	5000K	80	37	38.5	218	65	H28W-50811A-YJ3G
	5700K	80	37	38.5	218	65	H28W-57811A-YJ3G
	6500K	80	37	38.5	218	65	H28W-65811A-YJ3G
	2700K	90	32	33.5	189	65	H28W-27911A-YJ3G
	3000K	90	33	34	192	65	H28W-30911A-YJ3G
	4000K	90	31.2	36.2	205	65	H28W-40911A-YJ3G
	5000K	90	31.2	36.2	205	65	H28W-50911A-YJ3G

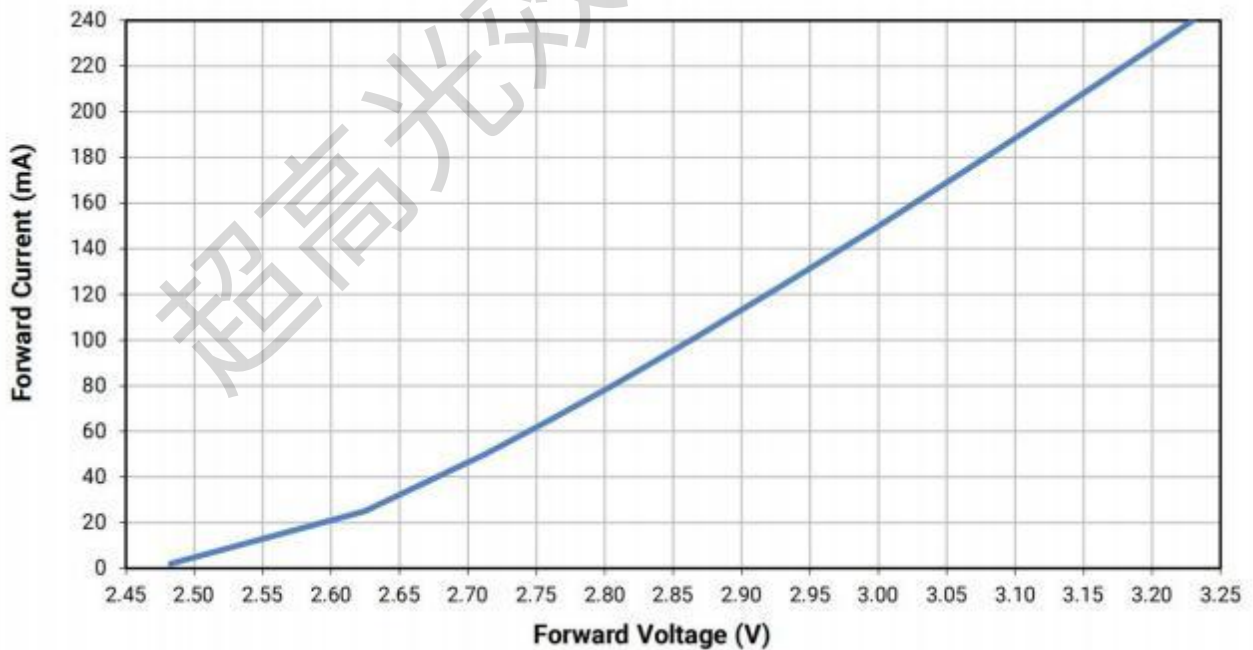
Note:

HXY maintains a tolerance of ± 2 on CRI and $\pm 7.5\%$ on luminous flux measurements.

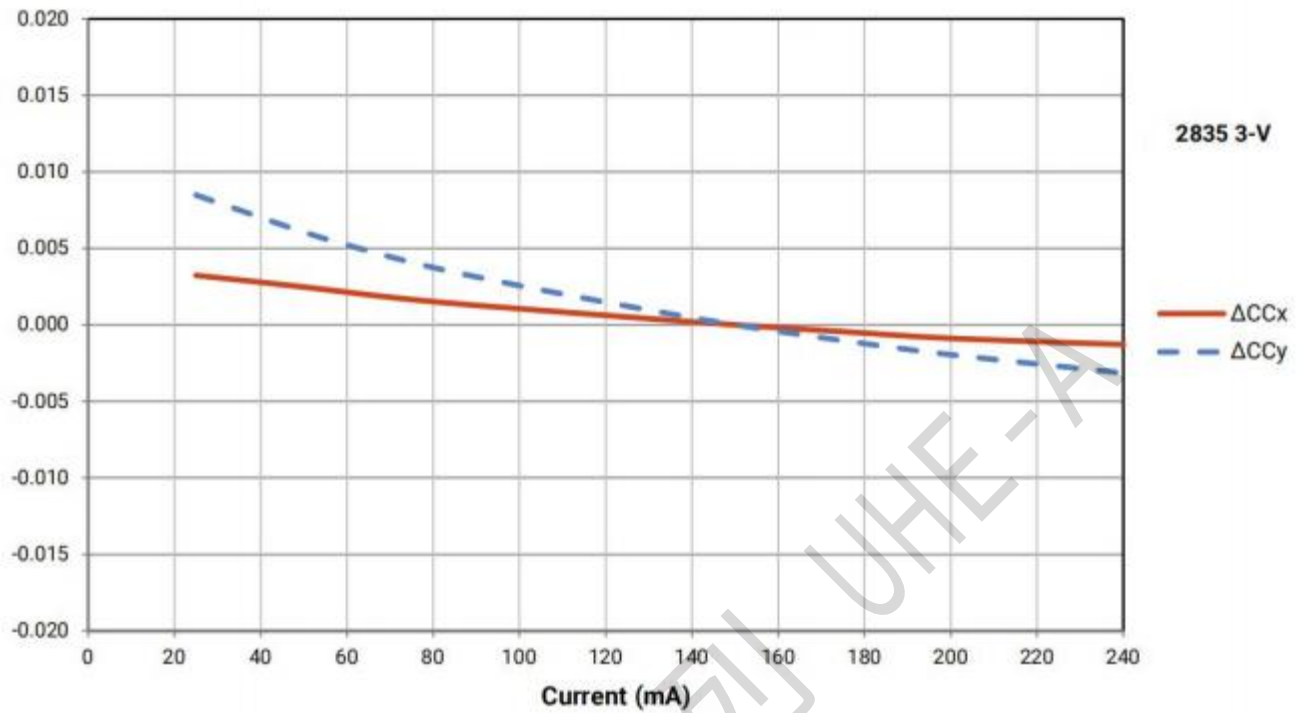
Relative Luminous Flux vs. Current



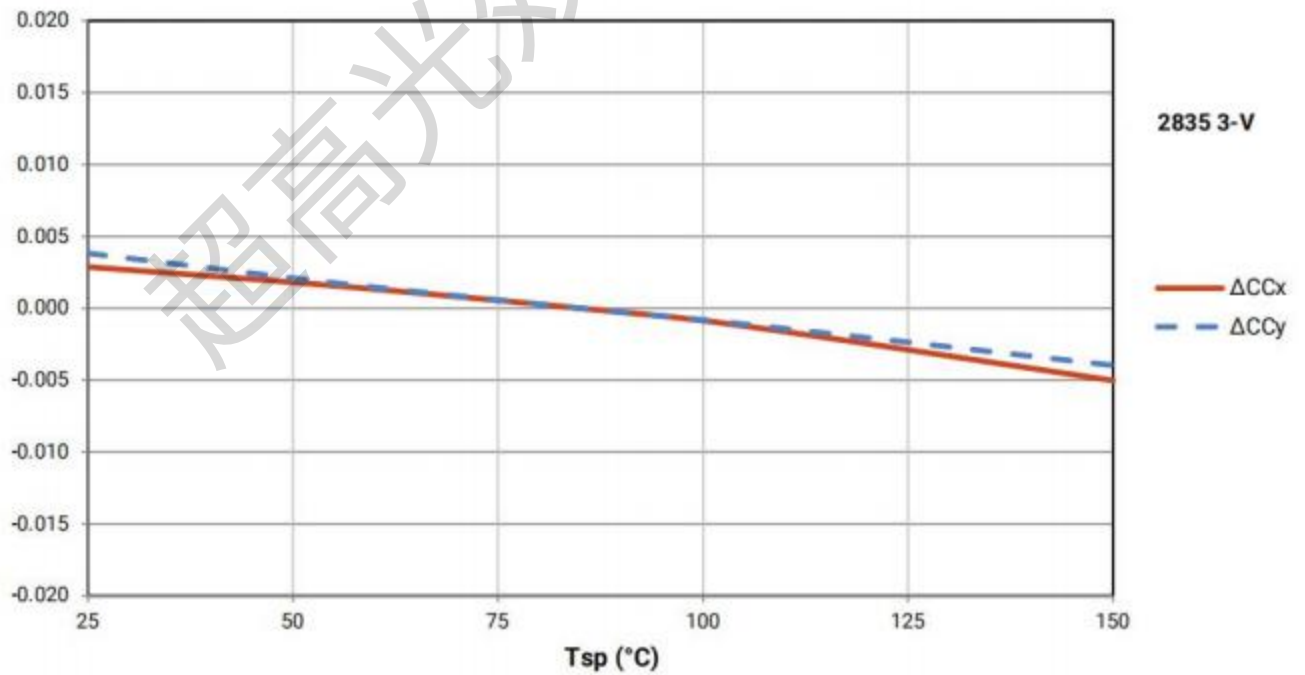
Electrical Characteristics



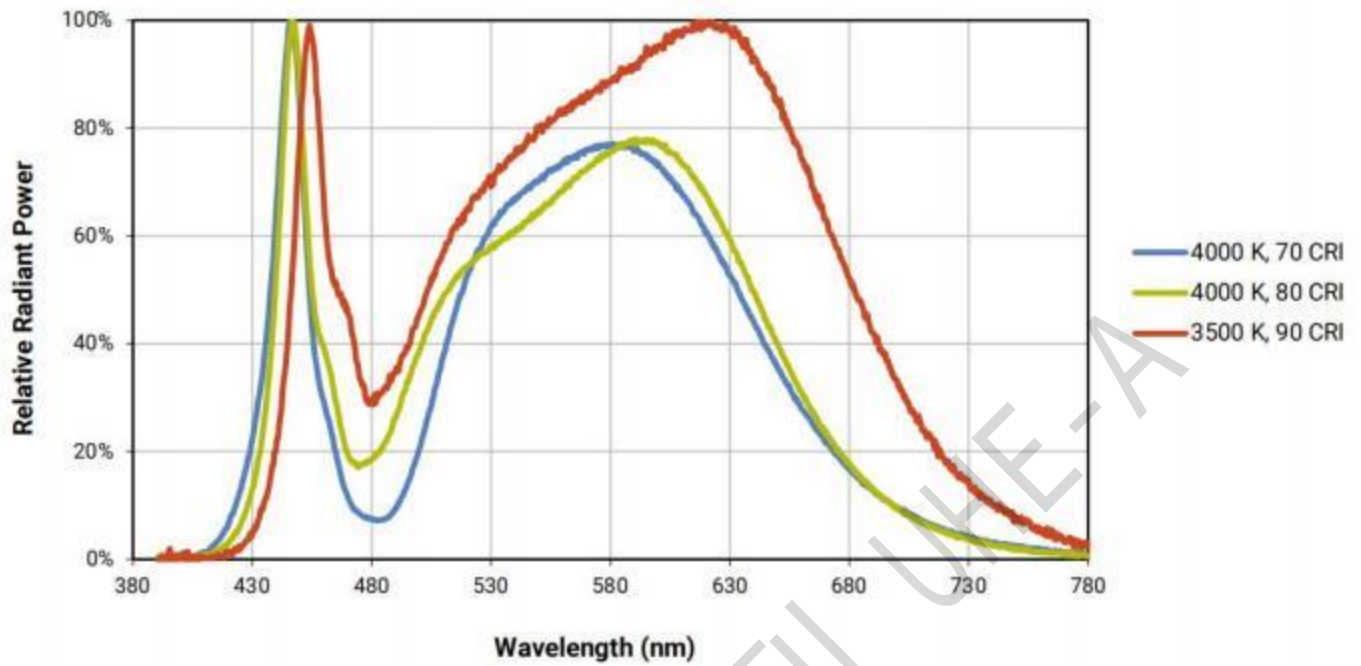
Relative Chromaticity vs. Current



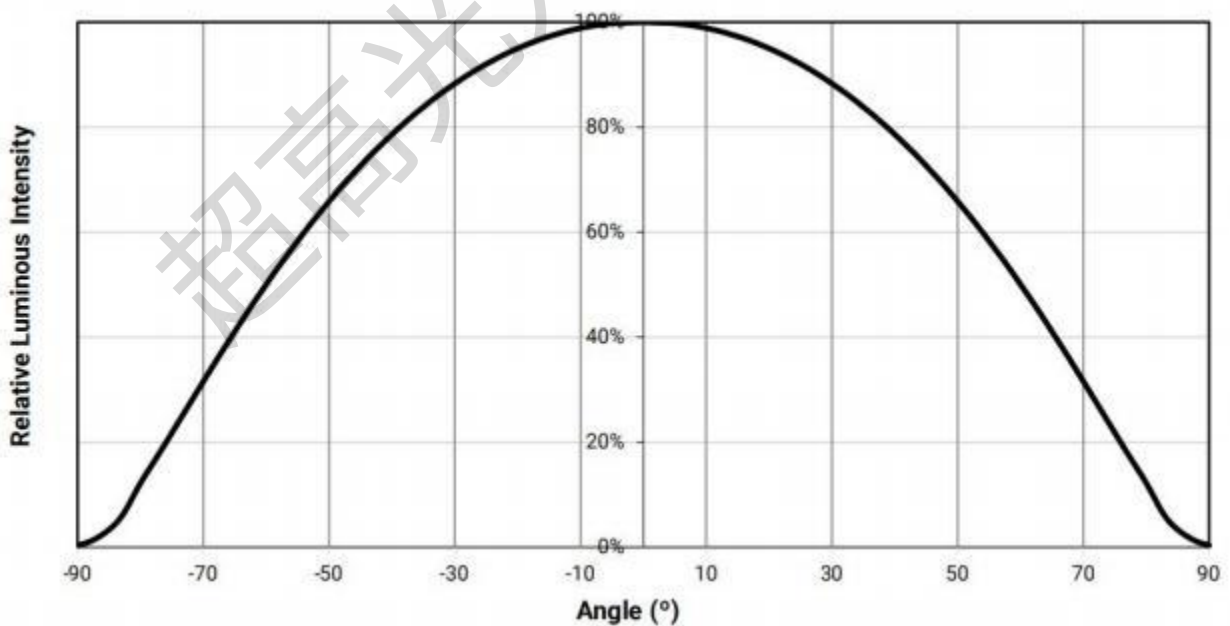
Relative Chromaticity vs. Temperature



Relative Spectral Power Distribution



Typical Spatial Distribution



Performance Groups - Luminous Flux (T_j= 25 ° C)

3-V LEDs are tested for luminous flux at 65 mA and placed into one of the following luminous-flux groups.

Group Code	Minimum Luminous Flux (lm)	Maximum Luminous Flux (lm)
3A	30	32
3B	32	34
3C	34	36
3D	36	38
3E	38	40
3F	40	42

Note:

HXY maintains a tolerance of $\pm 7.5\%$ on luminous flux measurements.

Performance Groups - Forward Voltage (T_a=25 ° C)

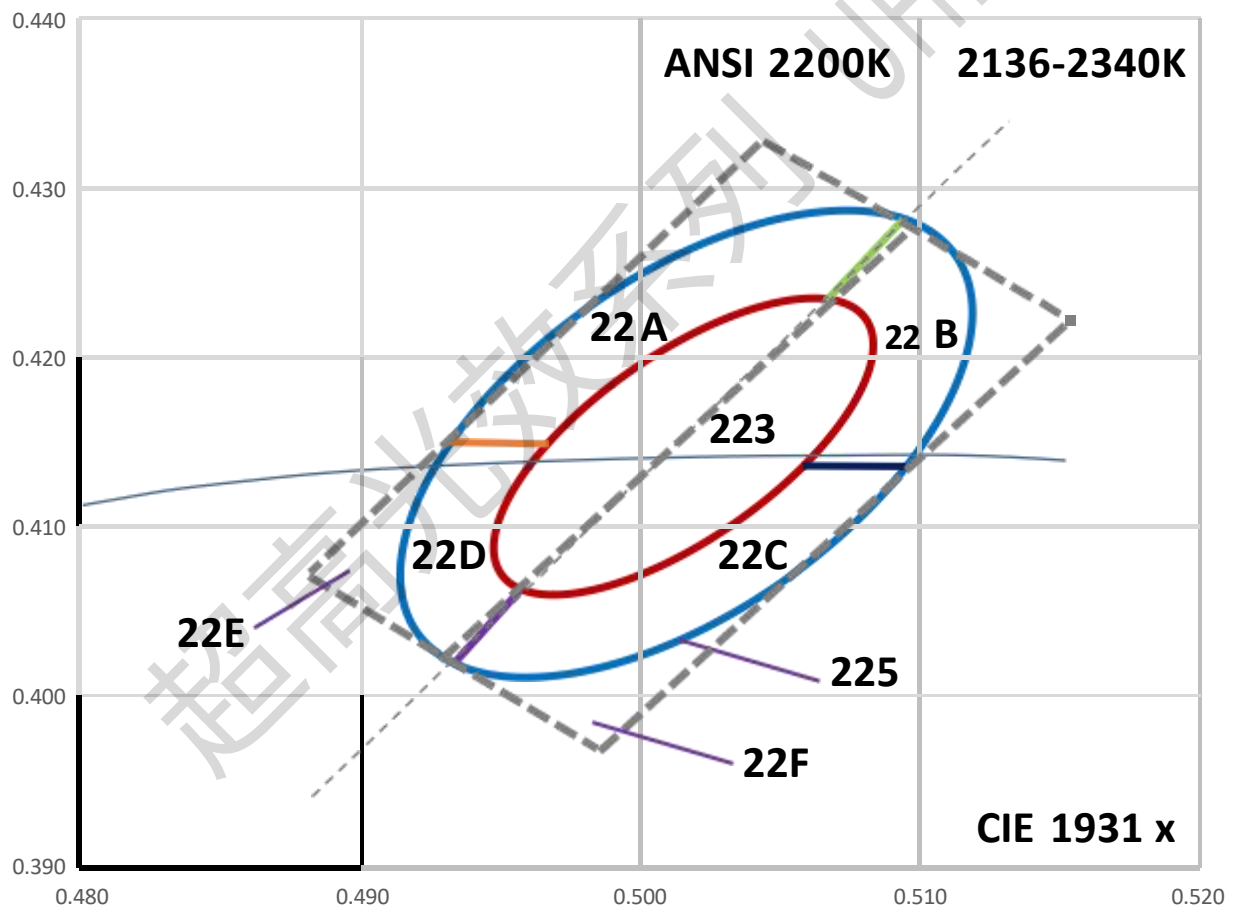
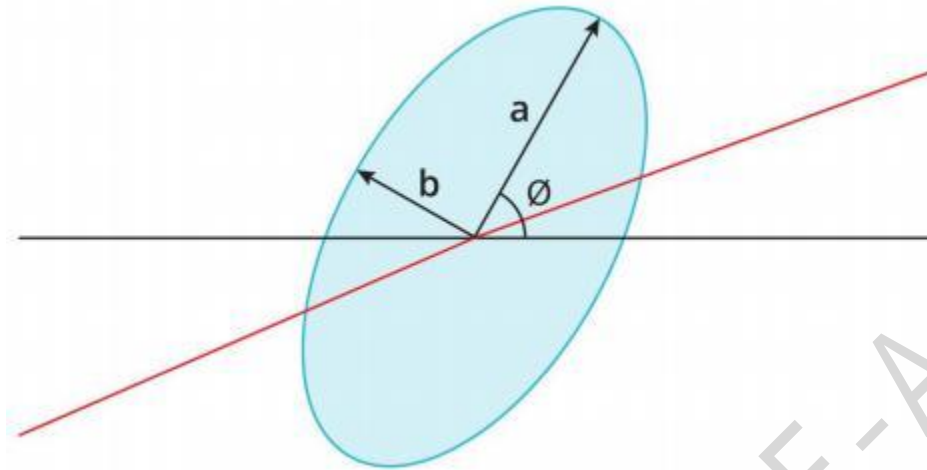
The following voltage bins are indicated in the Forward Voltage Bin field in the bin code for 2835 3-V LEDs.

Voltage Bin	Minimum Forward Voltage (V)	Maximum Forward Voltage (V)
QB	2.7	2.8
QC	2.8	2.9

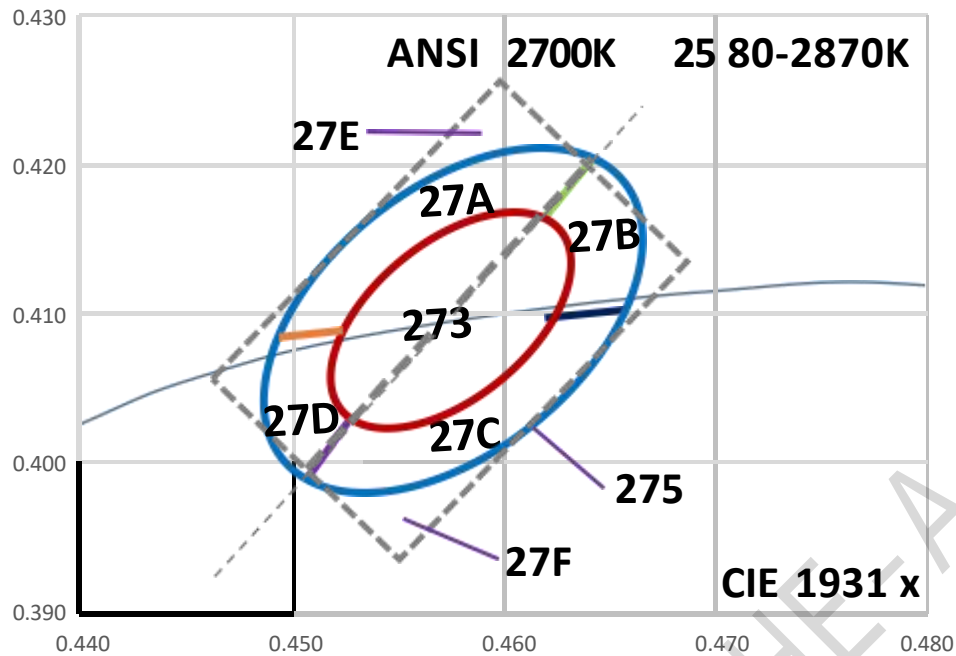
Note:

HXY maintains a tolerance of $\pm 0.10\text{V}$ on forward voltage measurements.

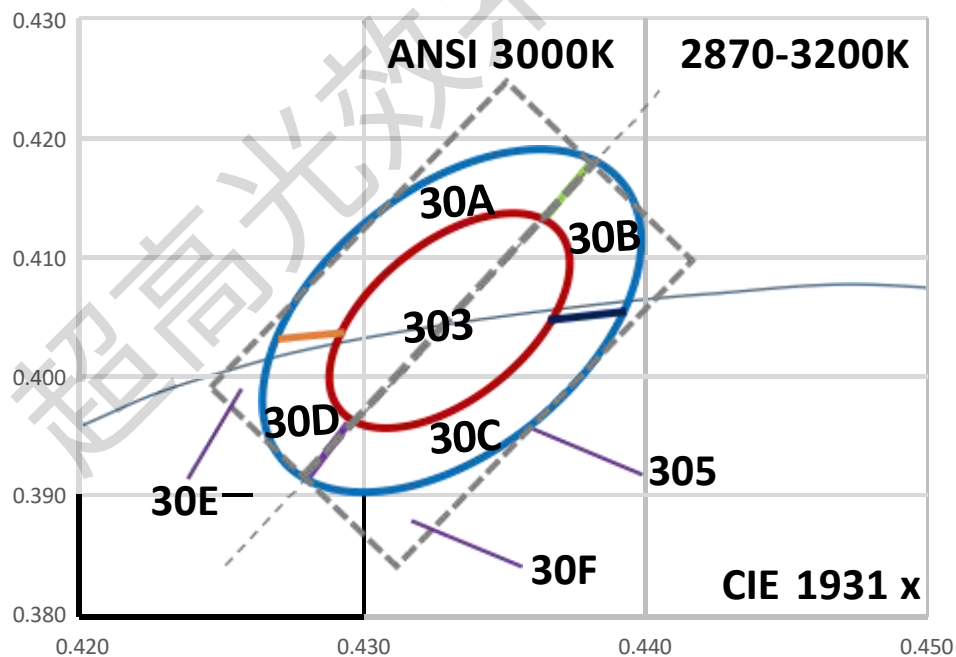
Color Bin Definition



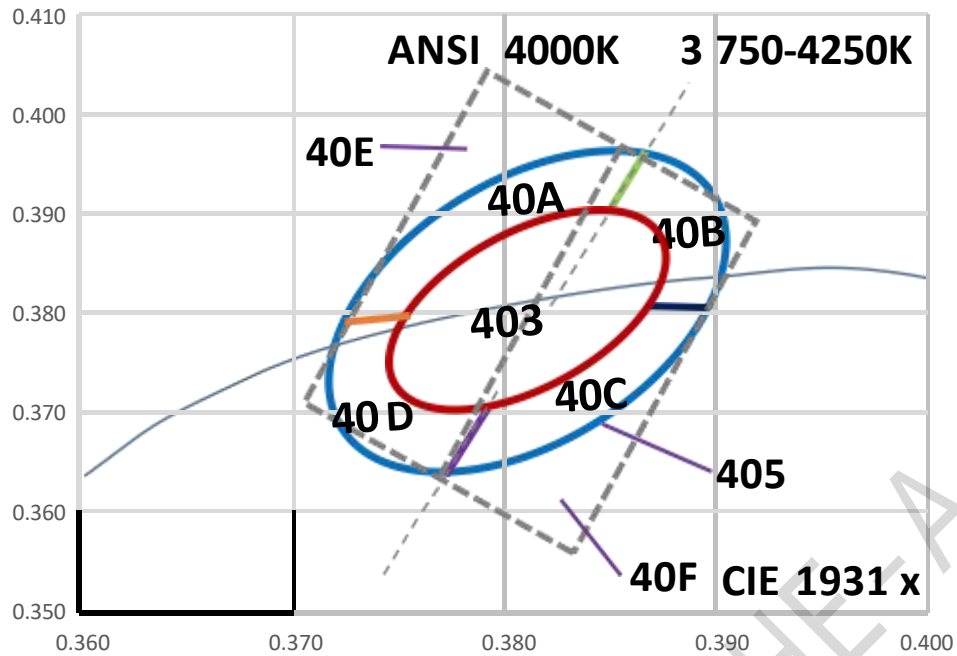
Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
2200K	3-step MacAdam	(0.5018, 0.4153)	0.00863	0.00398	49.27°
2200K	5-step MacAdam	(0.5018, 0.4153)	0.01438	0.00663	49.27°



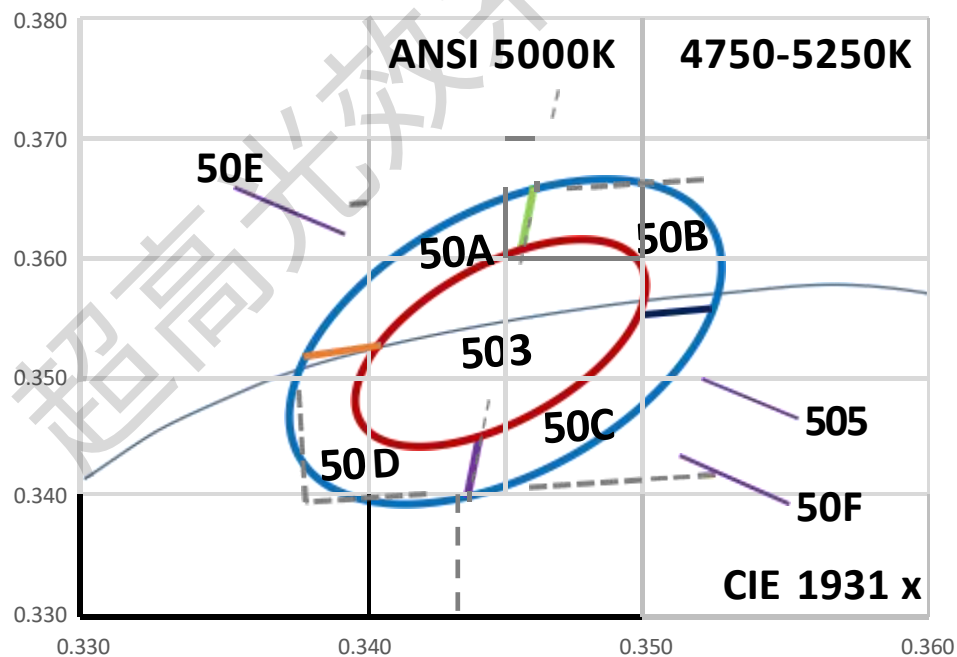
Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
2700K	3-step MacAdam	(0.4578, 0.4101)	0.00810	0.00420	53.70°
2700K	5-step MacAdam	(0.4578, 0.4101)	0.01350	0.00700	53.70°



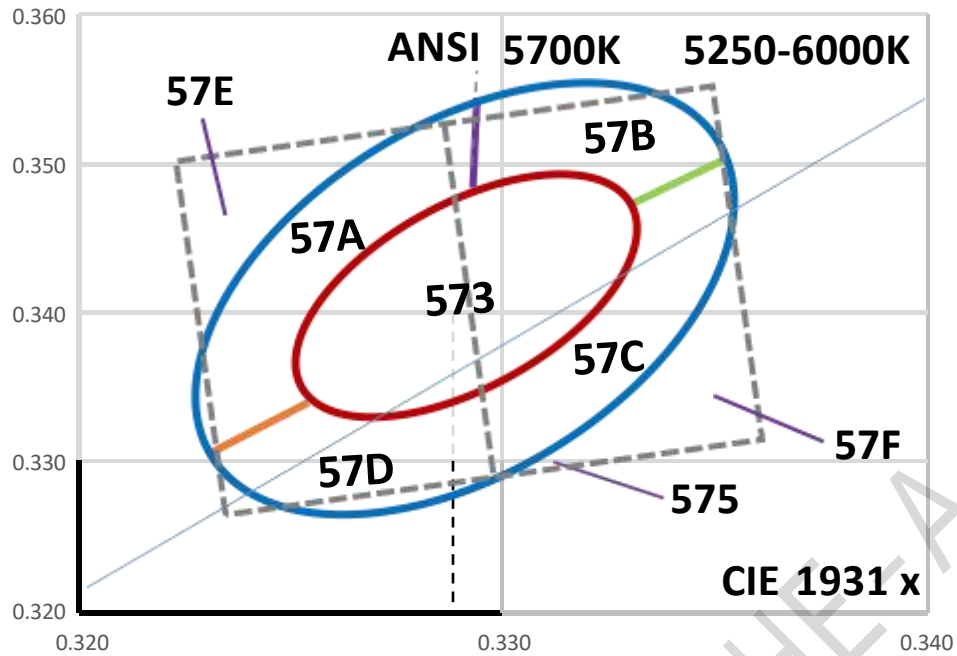
Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
3000K	3-step MacAdam	(0.4338, 0.4030)	0.00834	0.00408	53.22°
3000K	5-step MacAdam	(0.4338, 0.4030)	0.01390	0.00680	53.22°



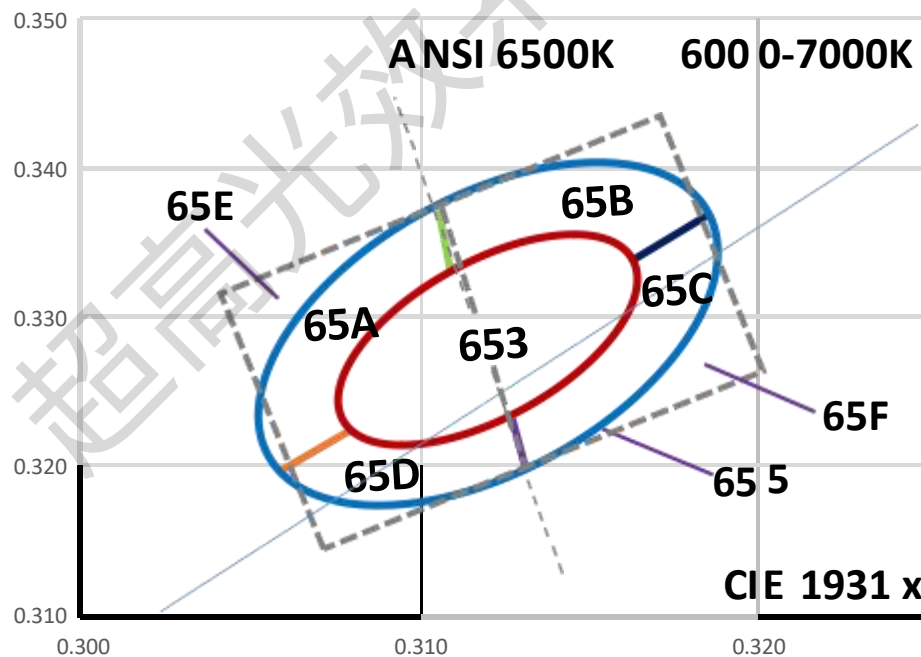
Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
4000K	3-step MacAdam	(0.3818, 0.3797)	0.00939	0.00402	53.72°
4000K	5-step MacAdam	(0.3818, 0.3797)	0.01565	0.00670	53.72°



Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
5000K	3-step MacAdam	(0.3447, 0.3553)	0.00822	0.00354	59.62°
5000K	5-step MacAdam	(0.3447, 0.3553)	0.00822	0.00590	59.62°

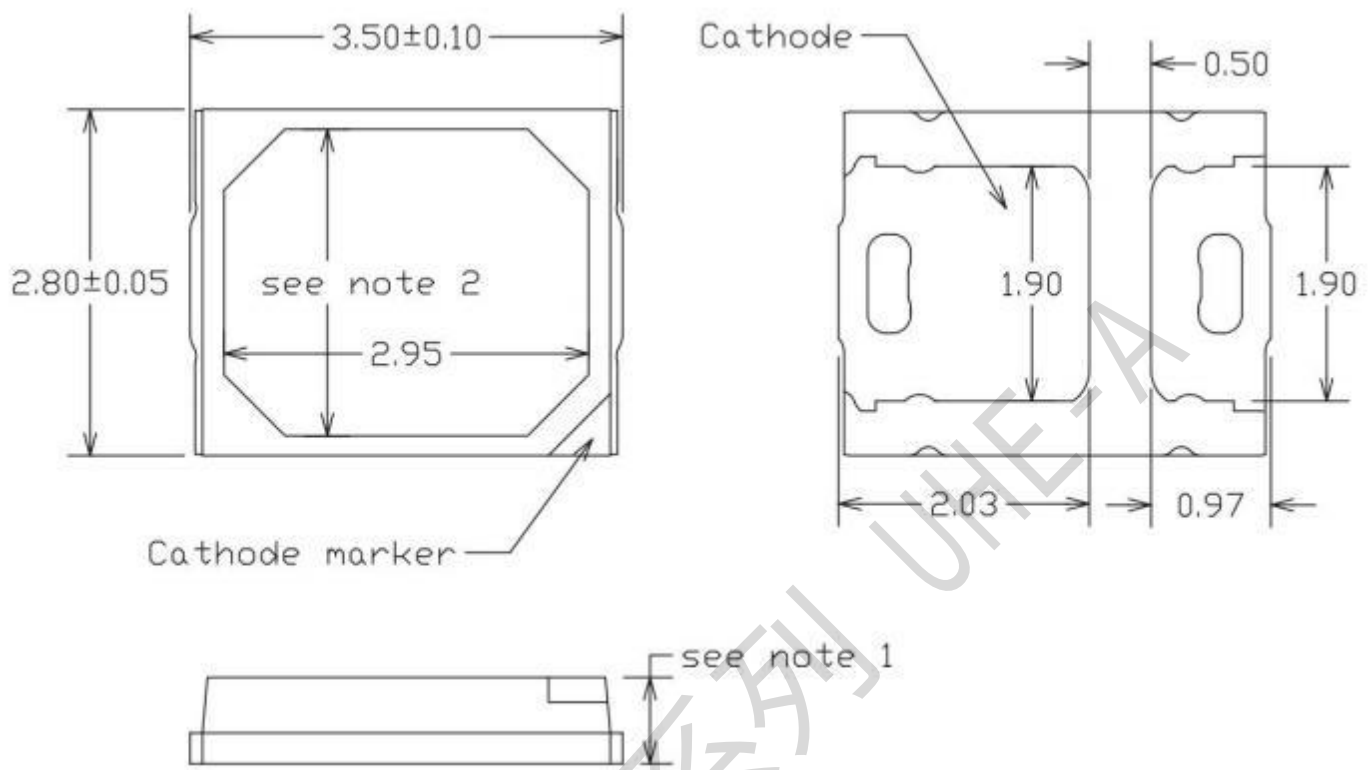


Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
5700K	3-step MacAdam	(0.3287, 0.3417)	0.00746	0.00320	59.09°
5700K	5-step MacAdam	(0.3287, 0.3417)	0.01243	0.00533	59.09°



Nominal CCT	Color Space	CENTER POINT (cx, cy)	Major Axis, a	Minor Axis, b	Ellipse Rotation Angle, θ
6500K	3-step MacAdam	(0.3123, 0.3282)	0.00669	0.00285	58.57°
6500K	5-step MacAdam	(0.3123, 0.3282)	0.01115	0.00475	58.57°

Mechanical Dimensions

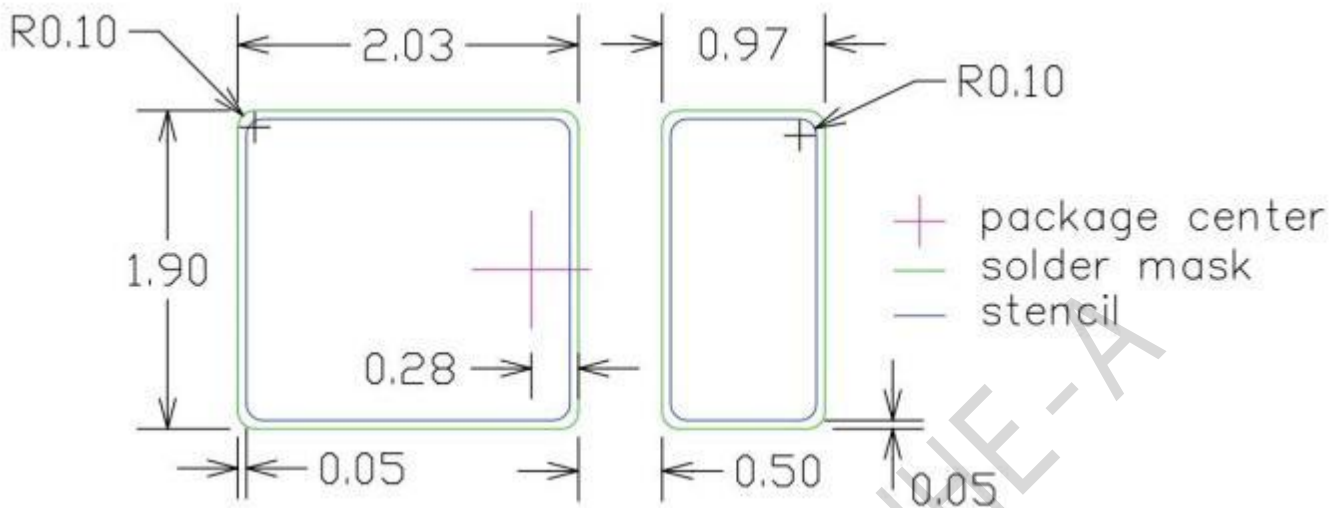


Item	Description
Package Materials	PPA
Electrodes Materials	Ag-plated Copper Alloy
Wire Material	Alloy Wire
Chip	26*39mil
Note 1	0.7±0.05mm
Note 2	2.53mm

Note:

1. Drawings are not to scale.
2. All dimensions are in millimeters.

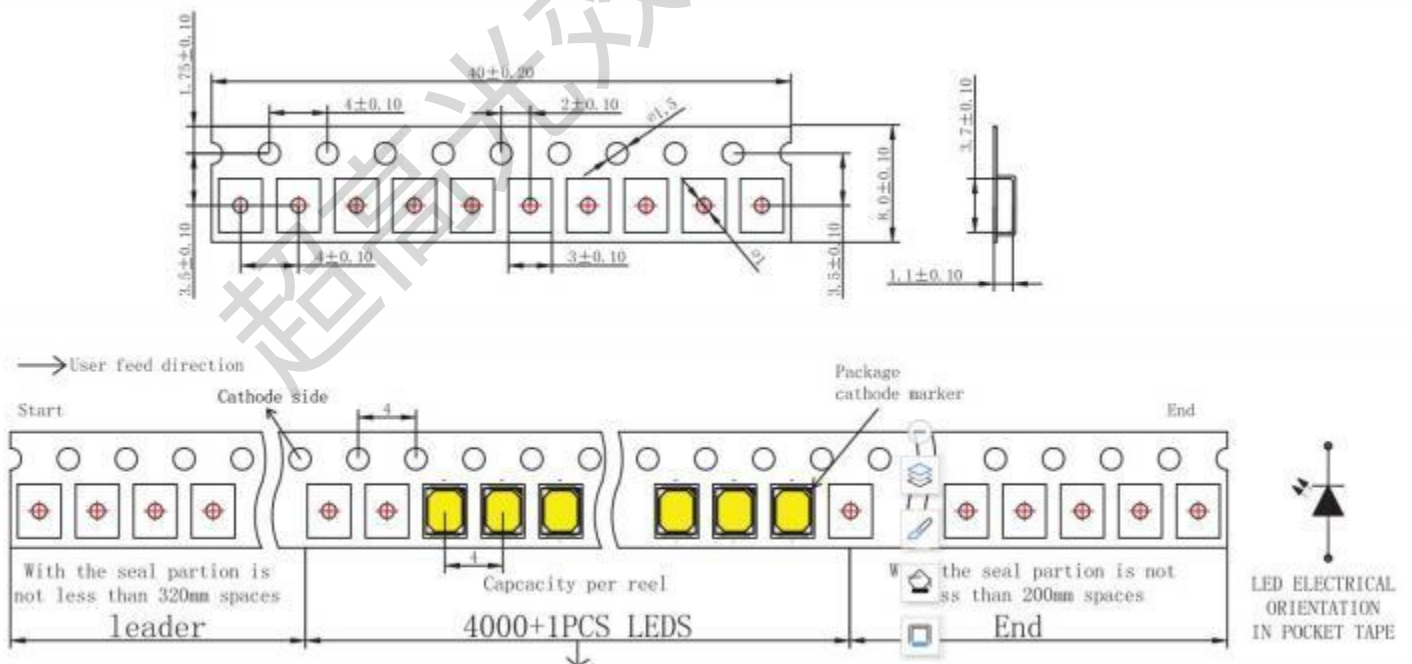
Solder Pad Design



Note:

1. Drawings are not to scale.
2. All dimensions are in millimeters.

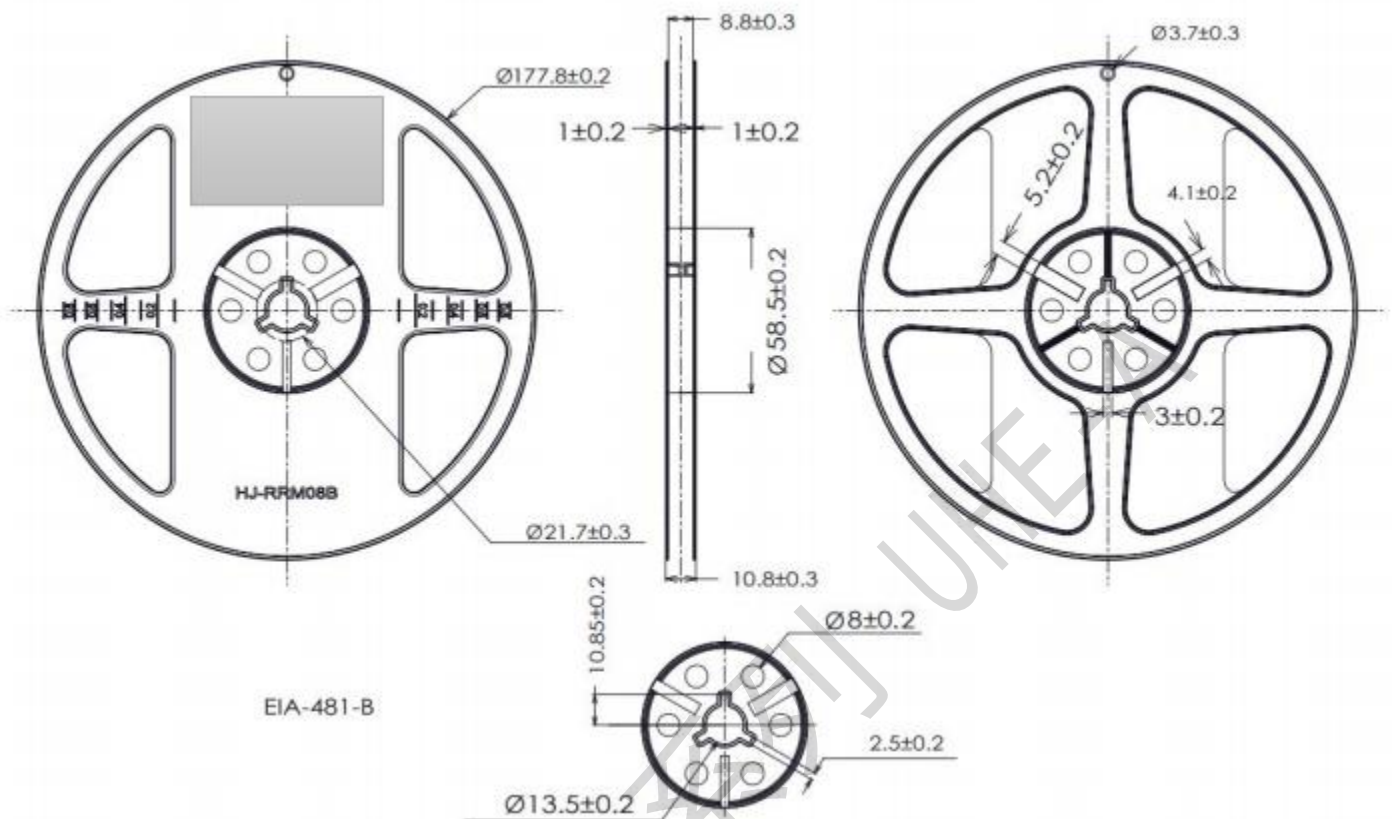
Packaging Information



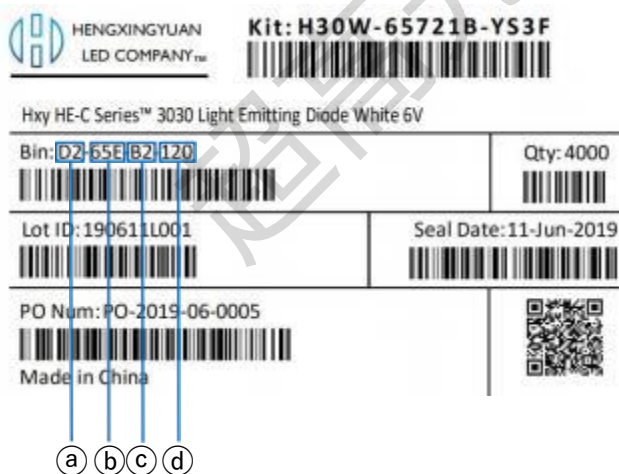
Note:

1. Drawings are not to scale.
2. All dimensions are in millimeters.

Reel Dimensions



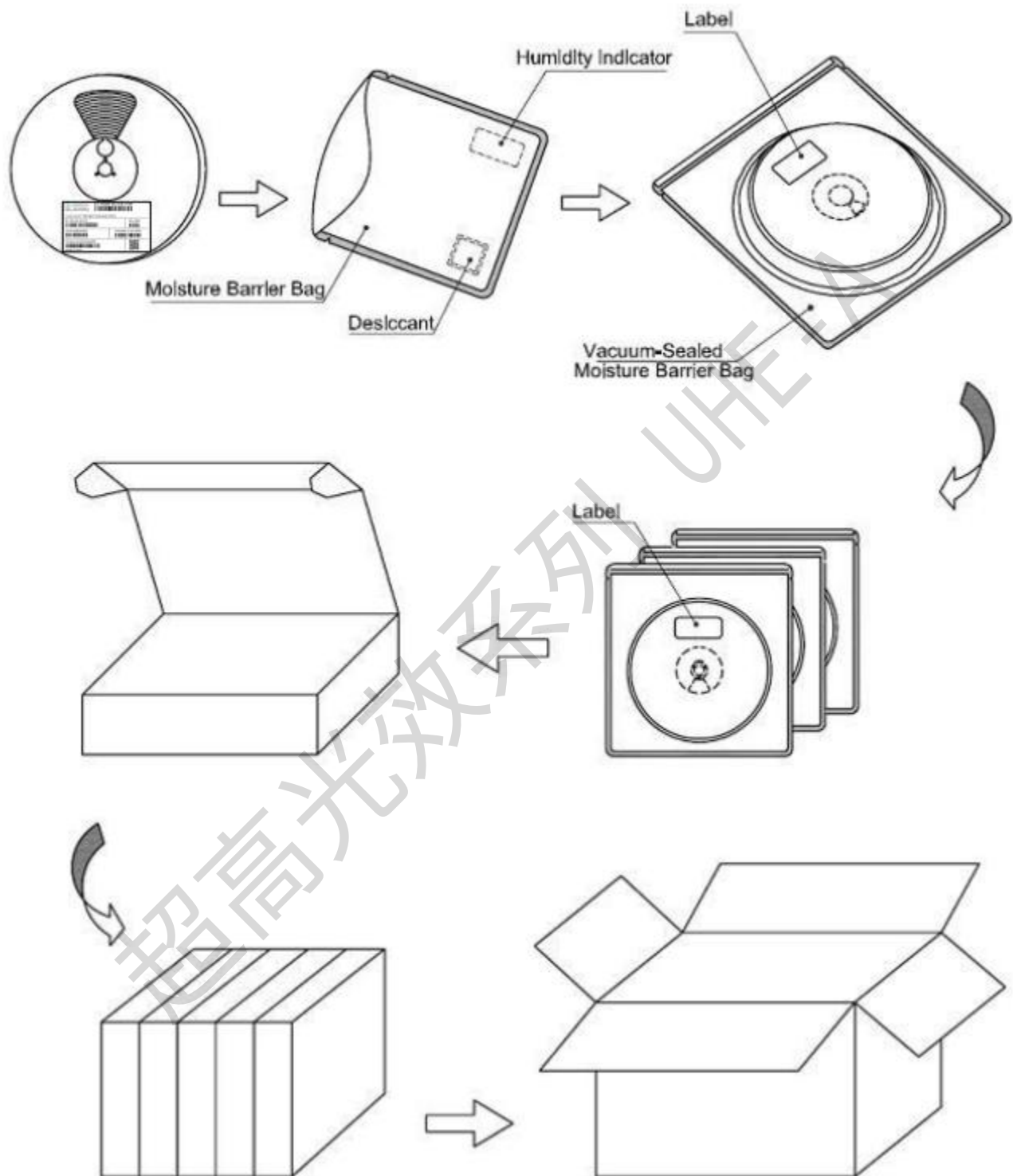
Label Structure



Bin Code:

- ①: Luminous Flux bin (refer to page 10)
- ②: Chromaticity bin (refer to page 11-14)
- ③: Forward Voltage bin (refer to page 10)
- ④: Standard Current(example: 120=120mA;60=60mA)

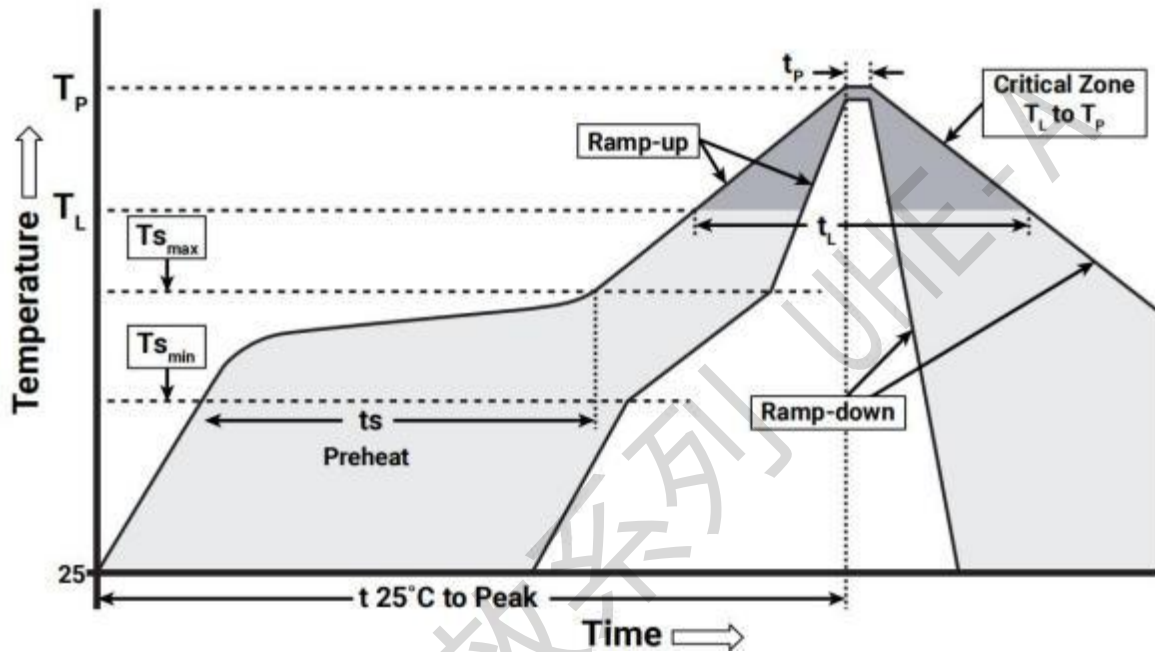
Packing Process (The quantity of PKG on the Reel to be Max 4,000 pcs)



Performance Groups - Luminous Flux ($T_j = 25\text{ }^{\circ}\text{C}$)

As a general guideline, CreeVenture recommends that users follow the recommended soldering profile provided by the manufacturer of the solder paste used, and therefore it is the lamp or luminaire manufacturer's responsibility to determine applicable soldering requirements.

Note that this general guideline may not apply to all PCB designs and configurations of reflow soldering equipment.



Profile Feature	Lead-Free Solder
Temperature Min. (T_{smin})	150 °C
Temperature Max. (T_{smax})	200 °C
Time (t_s) from T_{smin} to T_{smax}	60-120 seconds
Ramp-Up Rate (T_L to T_P)	3 °C/second
Liquidus Temperature (T_L)	217 °C
Time (t_L) Maintained Above T_L	60-150 seconds
Peak Package Body Temperature (T_P)	260 °C max.
Time (t_p) Within 5 °C of the Specified Classification Temperature (T_c)	30 seconds max.
Ramp-Down Rate (T_P to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

Note: All temperatures refer to the topside of the package, measured on the package body surface.

About Hengxingyuan

Hengyuan Technology's LED products pursue high efficiency, high quality, and high reliability, and aim to meet the needs of customers to the greatest extent. With the supply of high-standard supply chain services as the driving force, they contribute to the development of global LED green and healthy lighting power.

To learn more about our lighting solutions , visit hxylighting.com

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