

NLW2525AV5 Specification



Anhui Retop Electronics Co., Ltd.

Part No : NLW2525AV5

Version : V1.4

Date : 2020-04-15



NLW2525AV5



Features

- Ceramic package
- High lumen output, High efficiency
- Low thermal resistance
- Reflow compliance with-JEDEC J-STD-020C
- Uniform light distribution

Applications

- Motorbike Lighting
- Truck Work Lighting
- Car Lighting
- General Lighting

Specification

CCT	CRI Typical @350mA	Luminous Flux		Forward Current		View Angel	Thermal resistance
		Typ. @350mA	Typ. @700mA	Typ. @350mA	Max. @350mA	Typ. @350mA	Typ. @350mA
3000K	70	140lm	238lm	2.95V	3.10V	120°	5.5°C/W
4000K	70	150lm	255lm	2.95V	3.10V	120°	5.5°C/W
5700K	70	160lm	267lm	2.95V	3.10V	120°	5.5°C/W
6500K	70	158lm	265lm	2.95V	3.10V	120°	5.5°C/W
7500K	70	155lm	260lm	2.95V	3.10V	120°	5.5°C/W

Notes:

1. Photoelectric parameters: test current=350mA, test time=20ms, Ambient temperature=25°C ;
2. Viewing angle is 50% central beam intensity angle, Optical simulation software light source data of ProSourceLighttools \tracepro\ASAP\ZEMAX can be provided ;
3. ETI maintains a testing tolerance of $\pm 7\%$ on luminous flux and power measurements, ± 0.01 on CIE(x、y), ± 2 on CRI, ± 0.1 on voltage.

Absolute Maximum Ratings

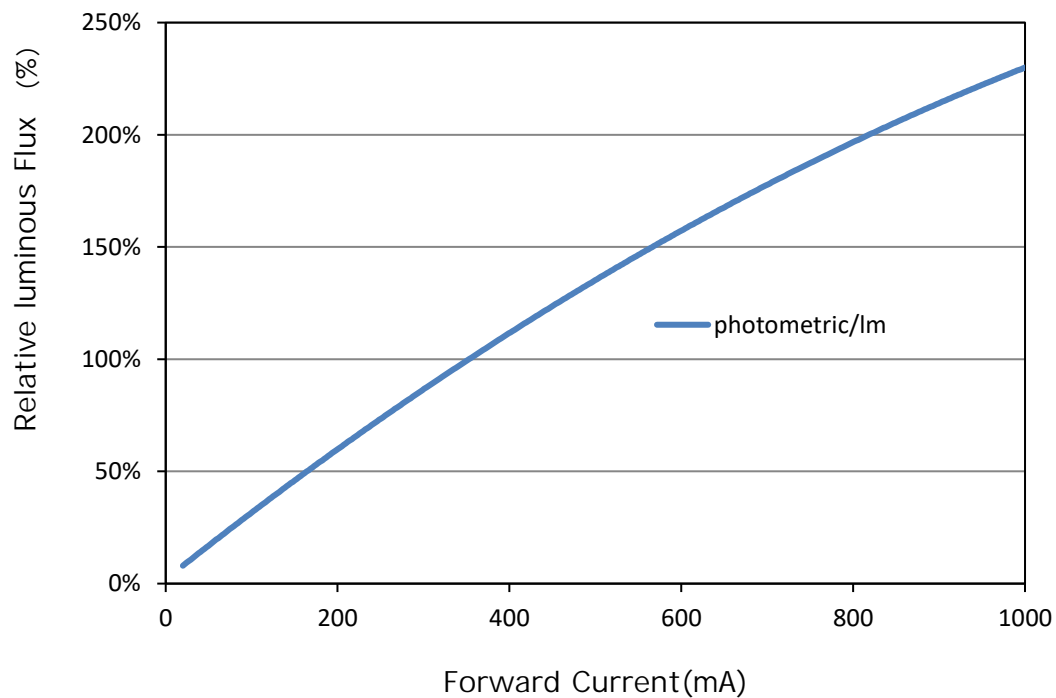
Item	Symbol	Maximum Rating
LED Junction Temperature T_j ()	T_j	135°C
Operating Temperature Range ()	T_{op}	-40°C - 120°C
Storage Temperature()	T_{stg}	-40°C - 85°C
DC Forward Current (mA)	I_F	1000mA
Pulsed Forward Current (mA)	I_{FM}	1250mA
Reverse Voltage	V_R	No Reverse Operation Design

Notes:

1. Maximum Forward Current and Maximum Pulse Current require the junction temperature to be lower than the rated junction temperature ;
2. IFM condition Pulse width at 500ms and duty cycle at 0.016

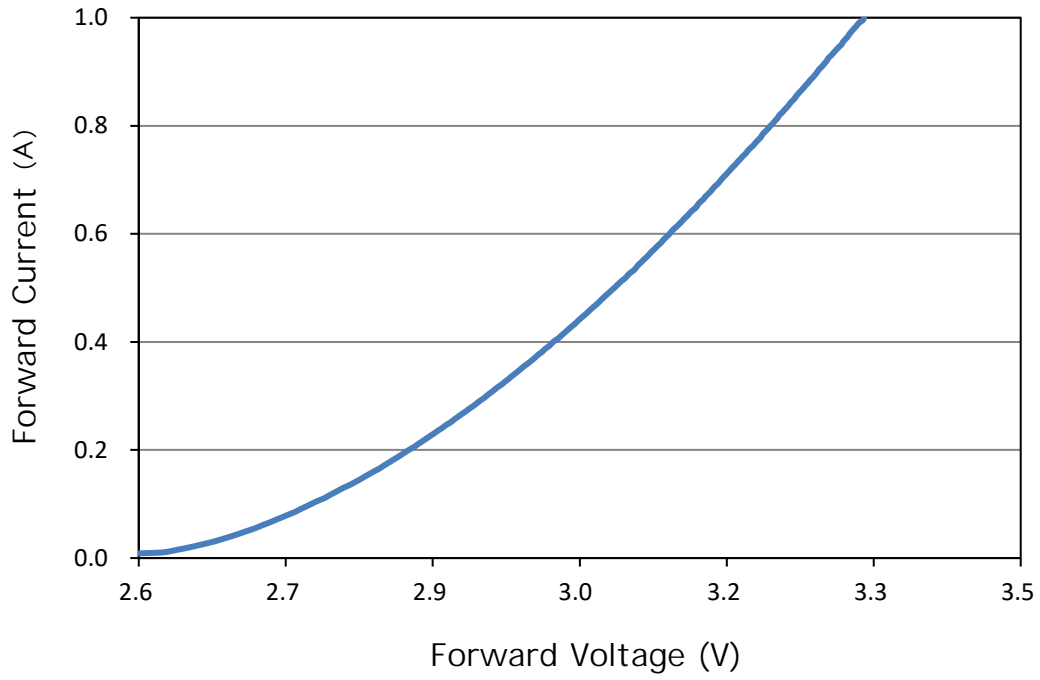
Product Characteristic Curve

Relative luminous Flux VS Forward Current

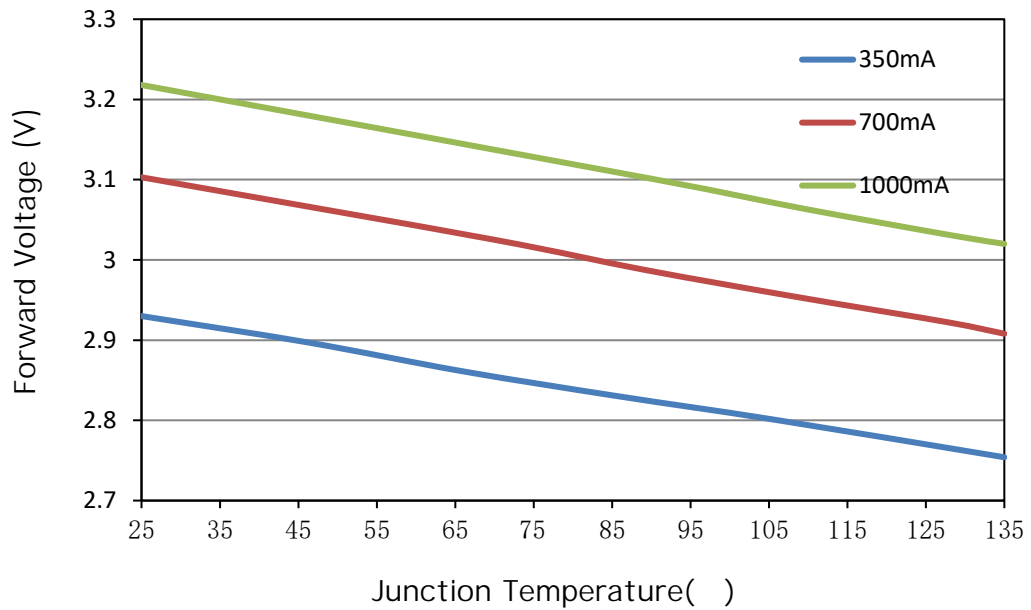


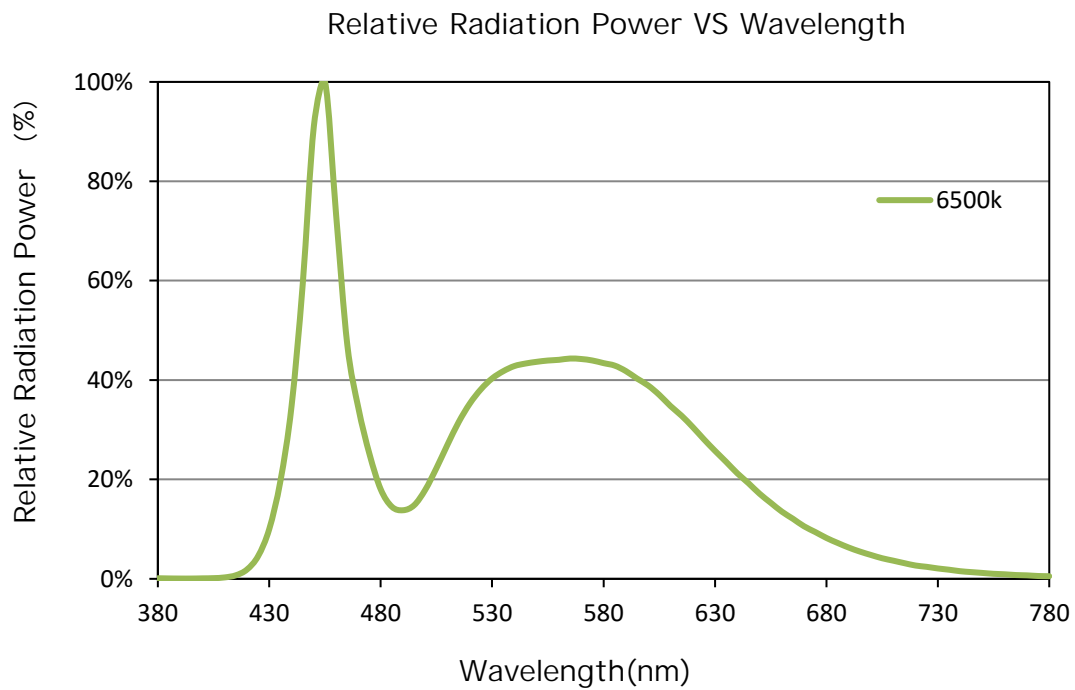
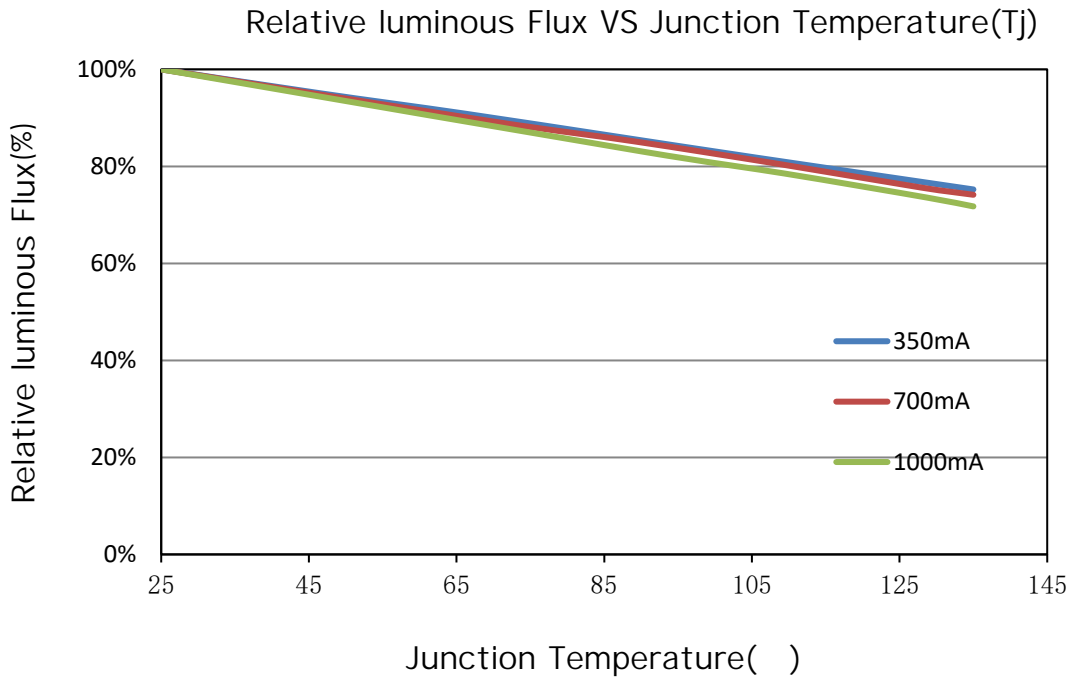
Product Characteristic Curve

Forward Current VS Forward Voltage

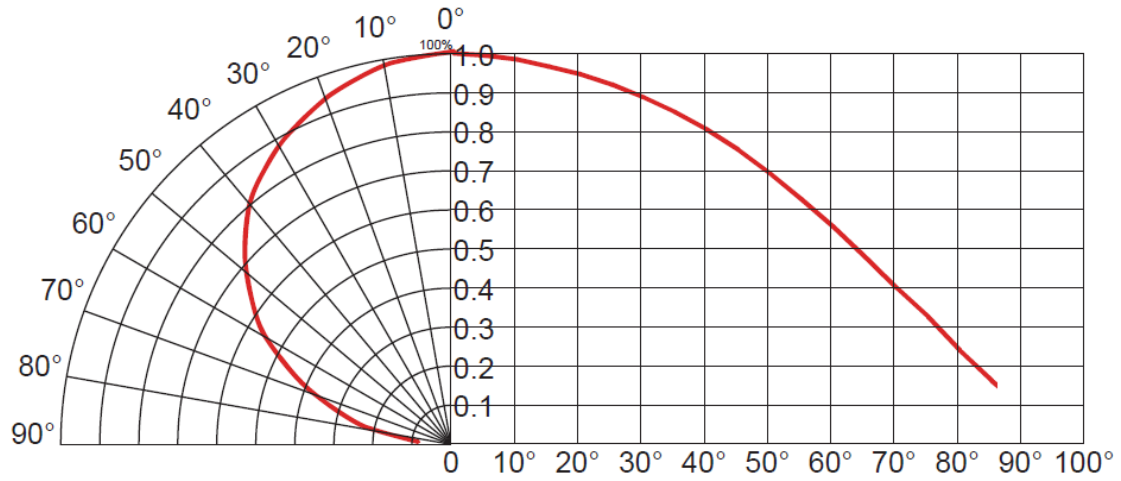


Forward Voltage VS Junction Temperature(Tj)

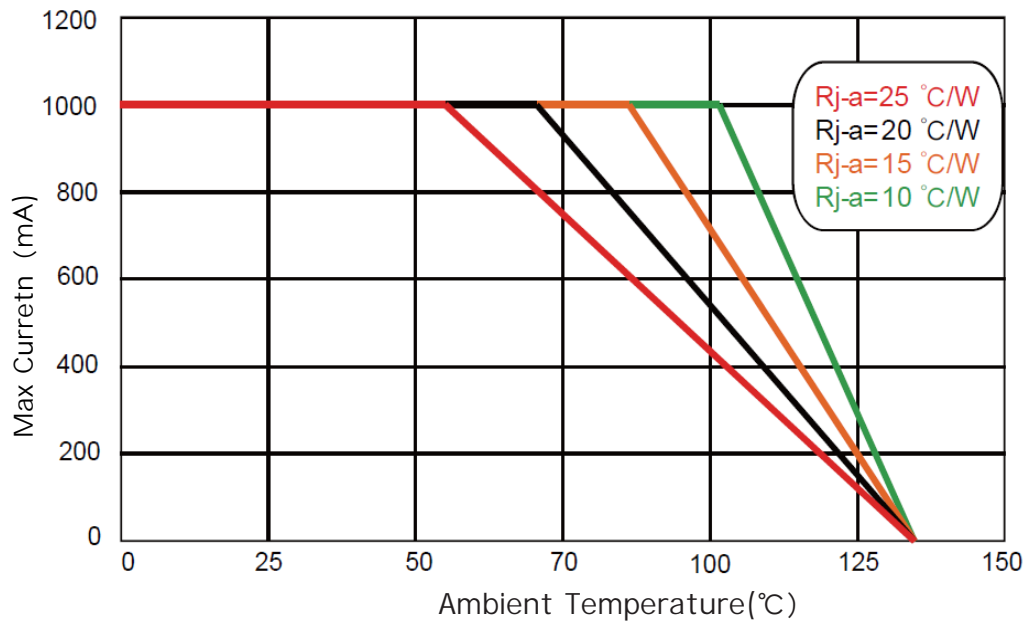




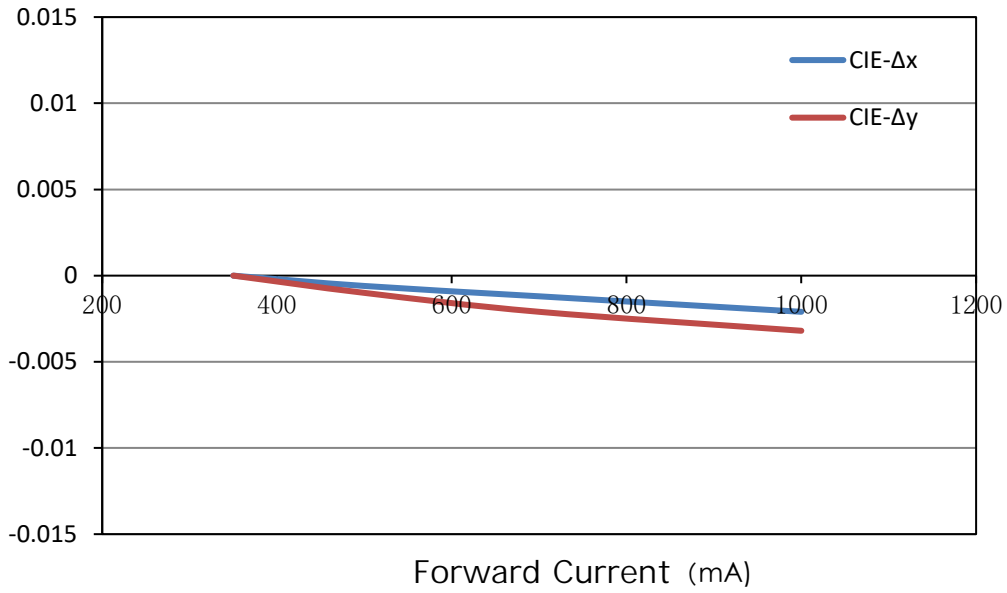
Relative luminous intensity VS Viewing Angle



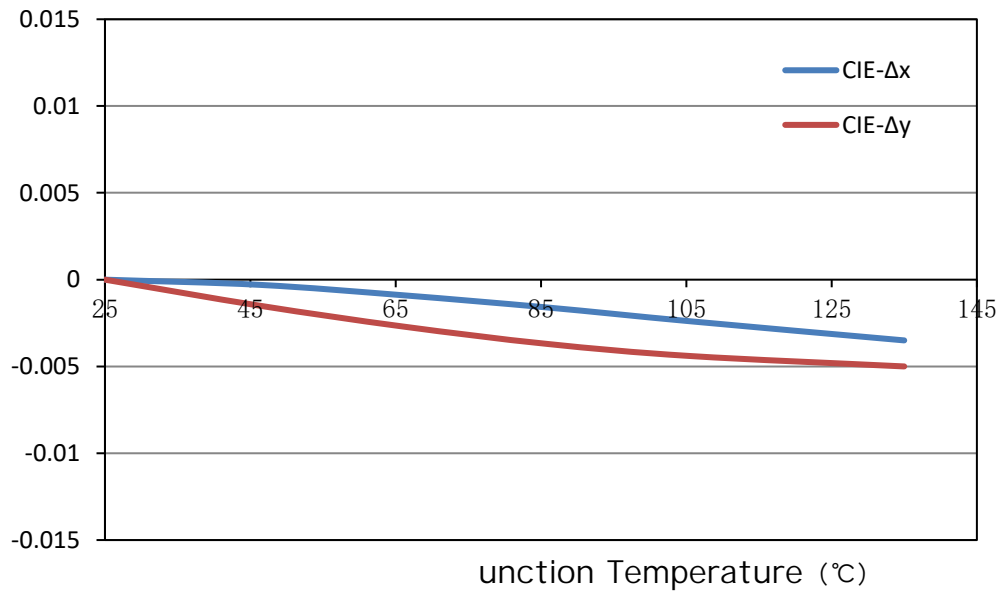
Max. Forward Current vs Ambient Temperature

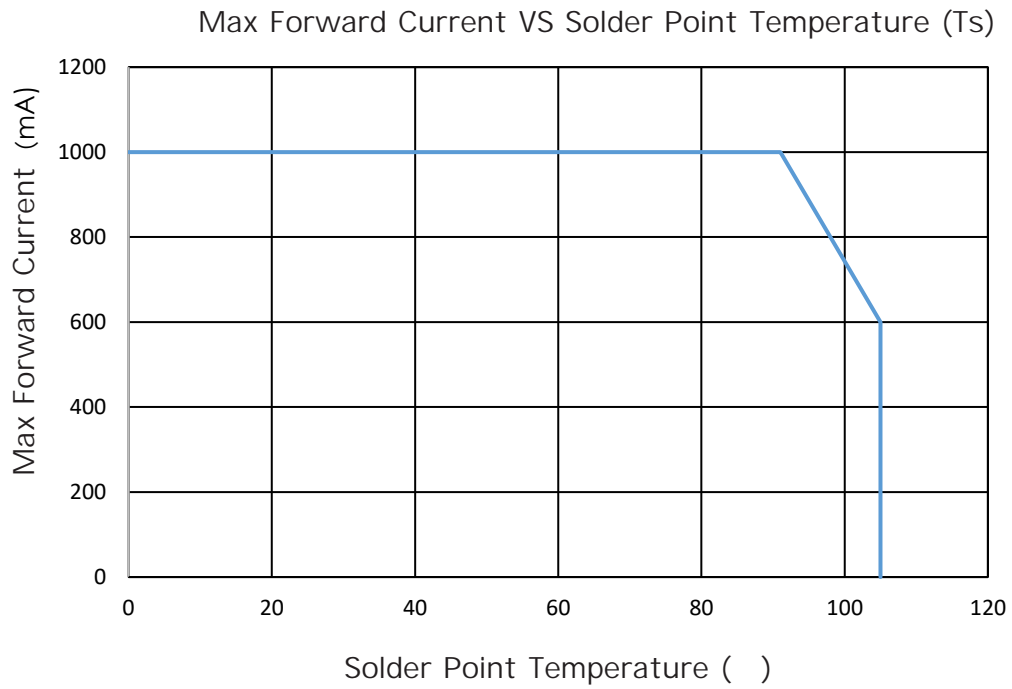


Chromaticity coordinates Shift VS Forward Current



Chromaticity coordinates Shift VS Junction Temperature

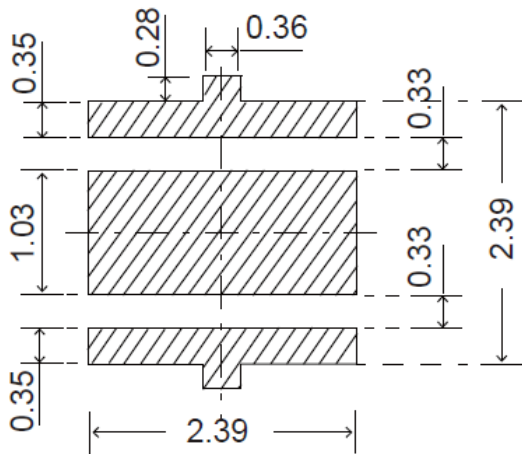
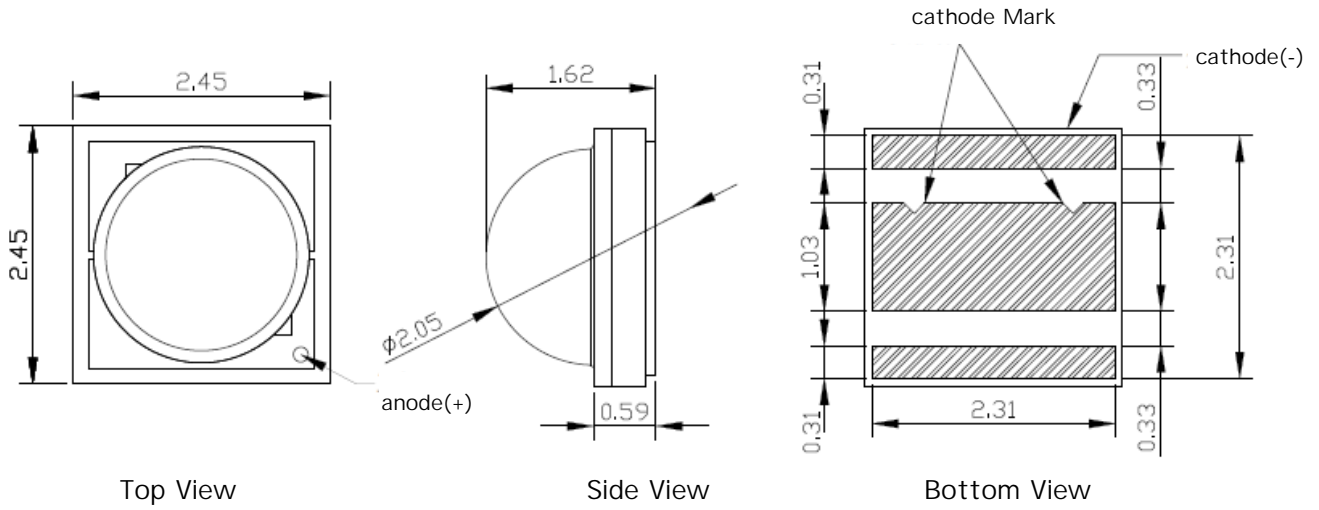




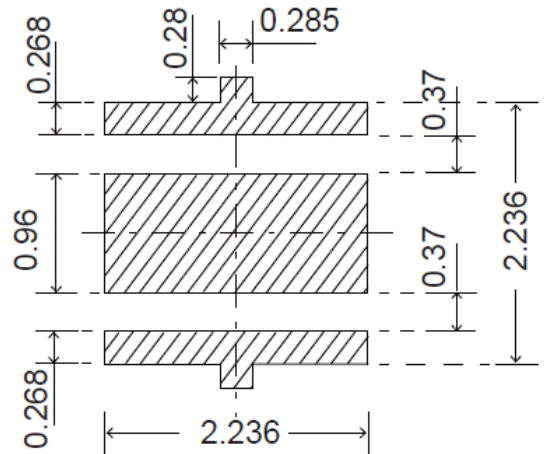
Notes: LED solder point temperature do not greater than 105 °C when current drive to 1000mA,
Otherwise, please lower driving current.

Product and PCB Solder Pad Dimensions

Unit : mm , Tolerance: ± 0.10

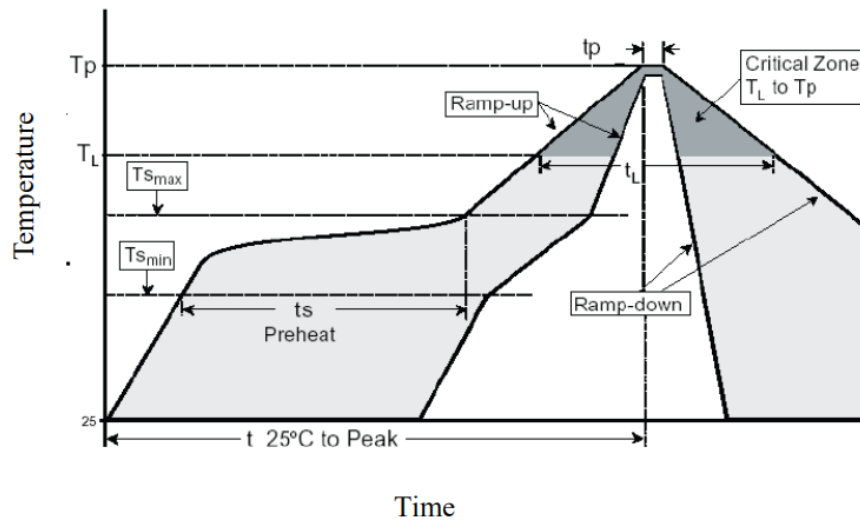


Recommended PCB Solder PAD Dimension



Recommended PCB Stencil Dimension

Reflow Soldering Characteristics



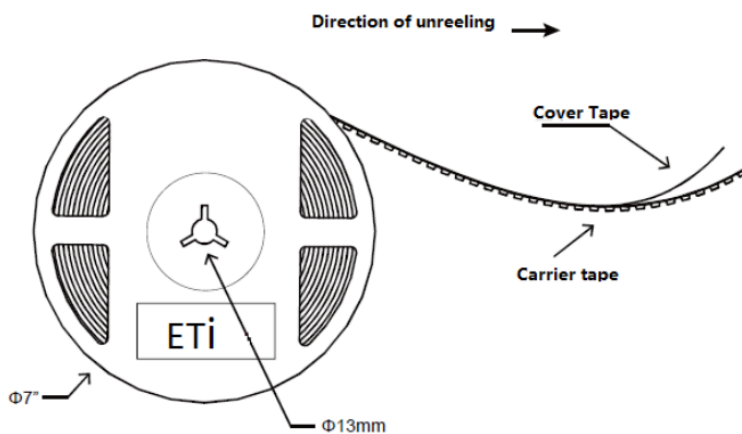
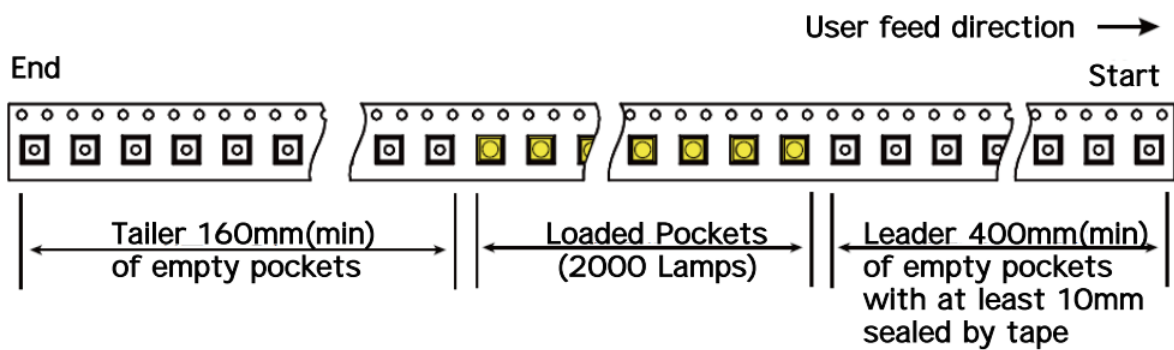
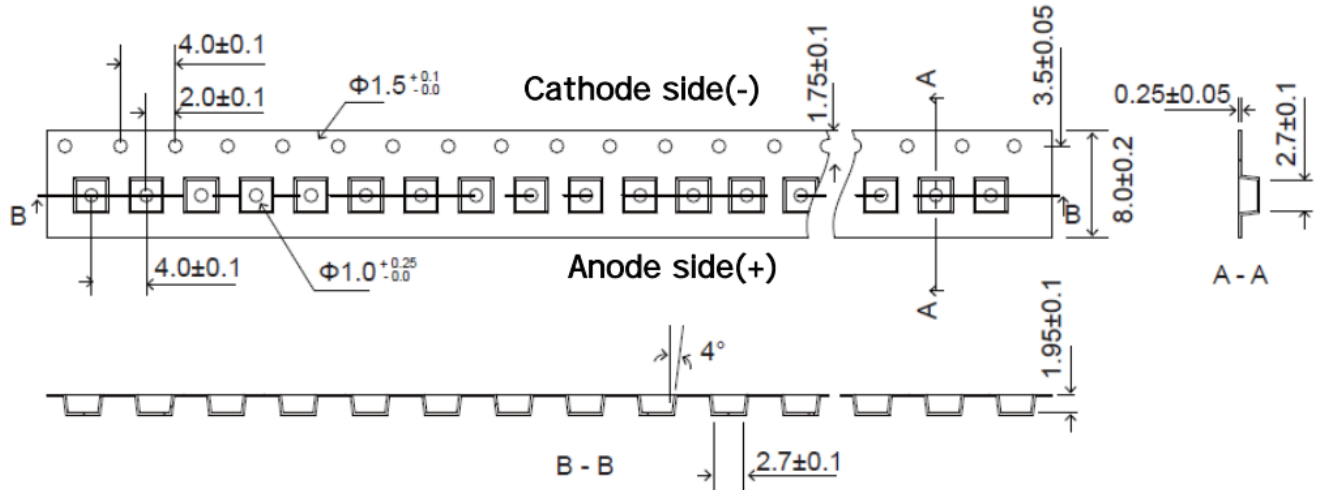
Profile Feature	Lead-Based solder	Lead-Free Solder
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	Max 3°C/s	Max. 3°C/s
Preheat: Temperature Min ($T_{s_{min}}$)	100°C	150°C
Preheat: Temperature Max ($T_{s_{max}}$)	150°C	200°C
Preheat Time ($T_{s_{min}}$ to $T_{s_{max}}$)	60-120s	60-180s
Time Maintain Above: Temperature (T_L)	183°C	217°C
Time Maintain Above: Time (t_L)	60-150s	60-150s
Peak/Classification Temperature (T_p)	215°C	260°C
Time within 5°C of Peak Temperature (t_p)	10-30s	20-40s
Ramp-Down (T_p to T_L)	Max. 6°C/s	Max 6°C/s
Time 25 °C to peak Temperature	Max. 6min.	Max. 8min.

Notes:

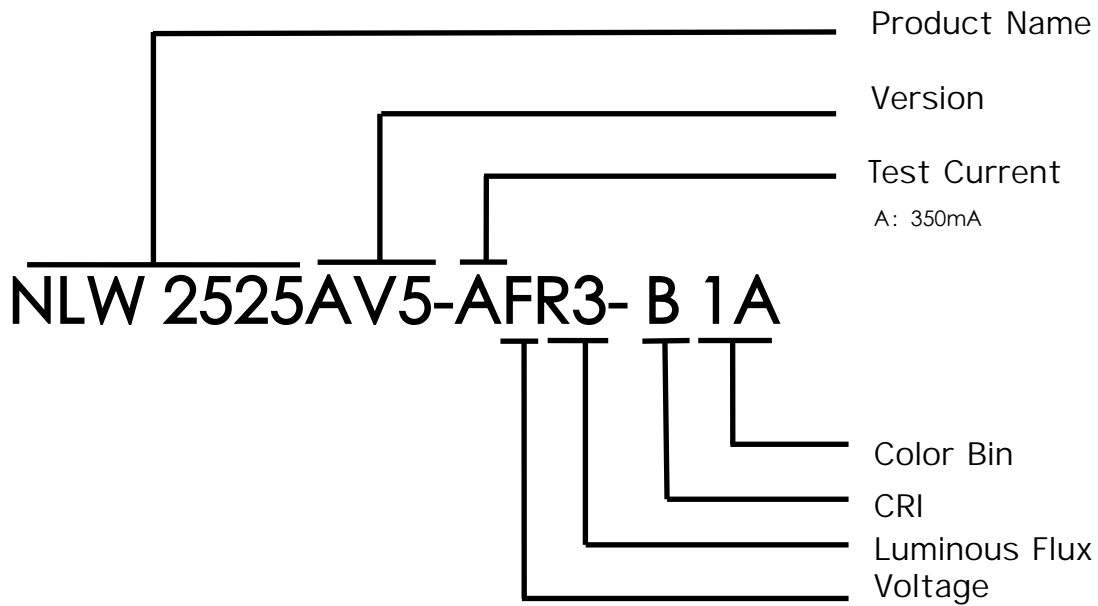
1. Compatible with the IPC/JEDEC J-STD-020C.
2. Product moisture sensitivity level: MSL2

Reel Dimensions : SPQ: 2000PCS/REEL

Unit : mm



Product Name Description :



Voltage

Voltage Rank	Min	Max	Unit
F	2.80	3.0	V

CRI

Level	CRI
B	70Ra

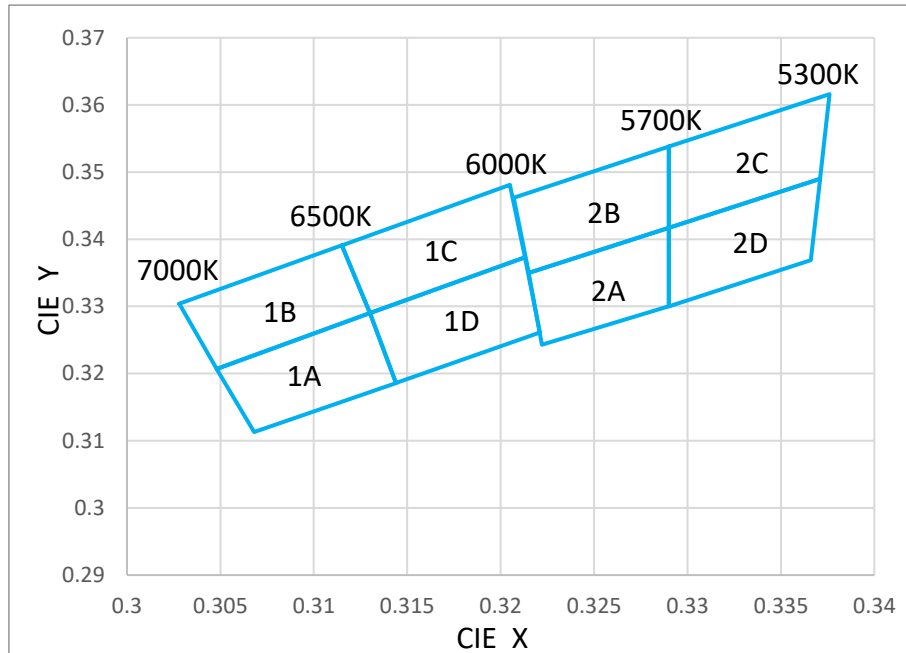
Luminous Flux

Flux Rank	Min	Max	Unit
R5	139	148	Lm
S2	148	156	Lm
S3	156	164	Lm
S4	164	172	Lm

CCT

Color Kit	CCT	Unit
E1	6500	K
E2	5700	K

Chromaticity Regions



Notes:

± 0.01 on CIE(X,Y) ,

Test current=1000mA ,

Test time=20ms ,

Ambient temperature=25

Color Bin-Chromaticity Coordinates

Region	x	y	Region	x	y	Region	x	y	Region	x	y
1A	0.3048	0.3207	1B	0.3028	0.3304	1C	0.3115	0.3391	1D	0.313	0.329
	0.313	0.329		0.3115	0.3391		0.3205	0.3481		0.3213	0.3373
	0.3144	0.3186		0.313	0.329		0.3213	0.3373		0.3221	0.3261
	0.3068	0.3113		0.3048	0.3207		0.313	0.329		0.3144	0.3186
2A	0.3215	0.335	2B	0.3207	0.3462	2C	0.329	0.3538	2D	0.329	0.3417
	0.329	0.3417		0.329	0.3538		0.3376	0.3616		0.3371	0.349
	0.329	0.33		0.329	0.3417		0.3371	0.349		0.3366	0.3369
	0.3222	0.3243		0.3215	0.335		0.329	0.3417		0.329	0.33

Color Kit:

Color	Kit	Chromaticity Bins
Cool White	E1	1A,1B,1C,1D
	E2	2A,2B,2C,2D

Ordering Description :

White LEDs have performance distribution and been classified into multiple color groups. It is recommended to order products in combination of color groups.

Color group classification for reference :

E1, E2,