

NLW7070PV2 LED Datasheet

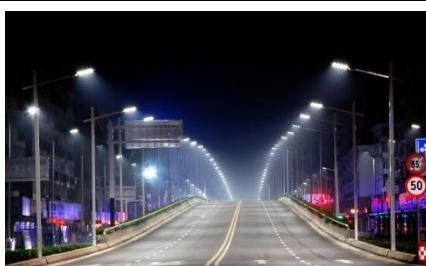


Anhui Retop Electronics Co., Ltd.

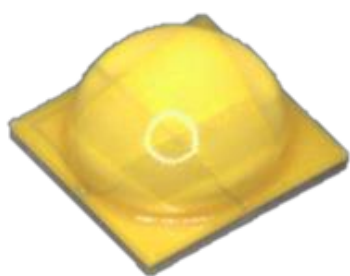
P/N: NL7070PV2

Version : V1.2

Date: 2019-10-25



NLW7070PV2



Features

- High Flux output, High Efficiency.
- Excellent optical performance
- Industry leading thermal resistance 1°C/W

Applications

- Outdoor lighting
- High beam、Low beam
- Fog light

产品规格 Specification (If=2100mA, Tj=25°C)

CCT	CRI Typ.	Luminous Flux Typ.	Forward Voltage Typ.	View angel Typ.	Thermal resistance Typ.
6500K	70	1980lm	6V	130°	1°C/W

Notes :

1. Electric-optical Parameters Test Condition : IF=2100mA, Test Time =20ms, Ambient Temperature = 25 ;
2. The viewing angle is 50 % center light intensity angle,Opticalsimulation software light source data of ProSource\Lighttools\TracePro\ASAP\Zemaxetccan be provided ;
- 3.ETI maintains a testing tolerance of $\pm 7\%$ on flux and power measurements, ± 0.007 on chromaticity (CCxCCy), ± 2 on CRI measurements,Voltage, $\pm 0.1V$ on voltage testing.

Absolute Maximum Ratings

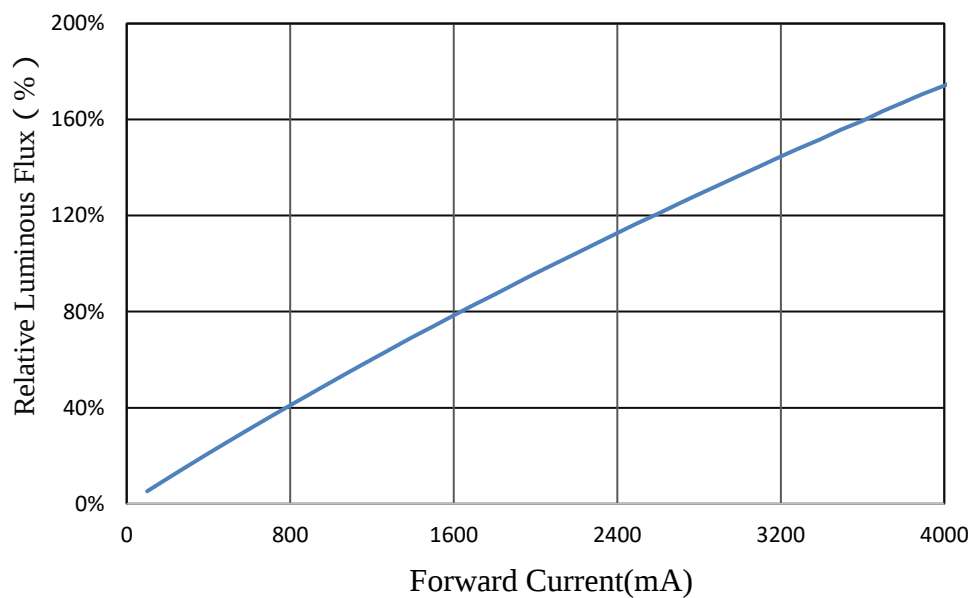
Item	Absolute Maximum Ratings
Forward Current	100 - 4000mA@6V
	50 - 2000mA@12V
Pulse Forward Current	100 - 4500mA@6V
	50 - 2250mA@12V
LED Junction Temperature (Tj)	150℃
LED Solder Temperature (Ts)	105℃
Operation Temperature	-40℃ ~ 120℃
Storage Temperature	-40℃ - 120℃
Reflow Temperature (JEDEC 020c)	260℃
Reflow (Cycle)	3

Notes :

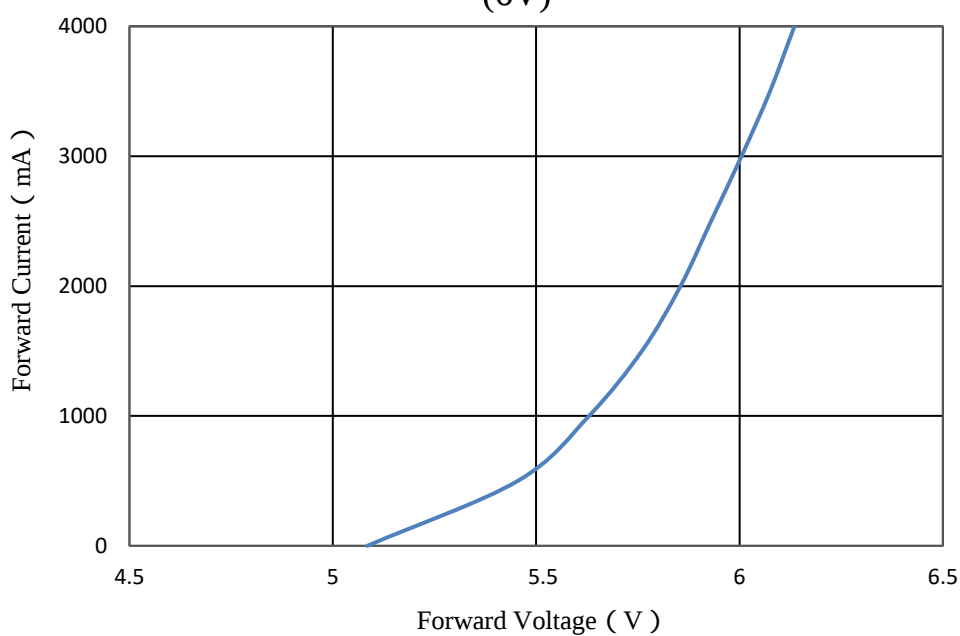
1. Maximum Forward Current and Maximum Pulse Current require the junction temperature to be lower than the rated junction temperature ;
2. IFM condition Pulse width at 50ms and duty cycle at 0.016 ;

Product characteristics curve

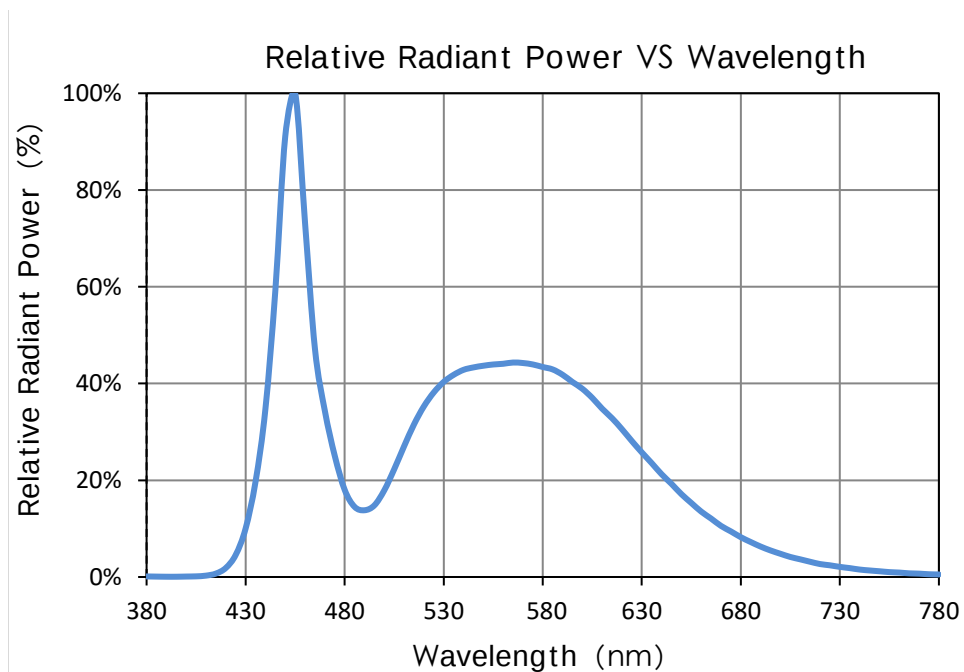
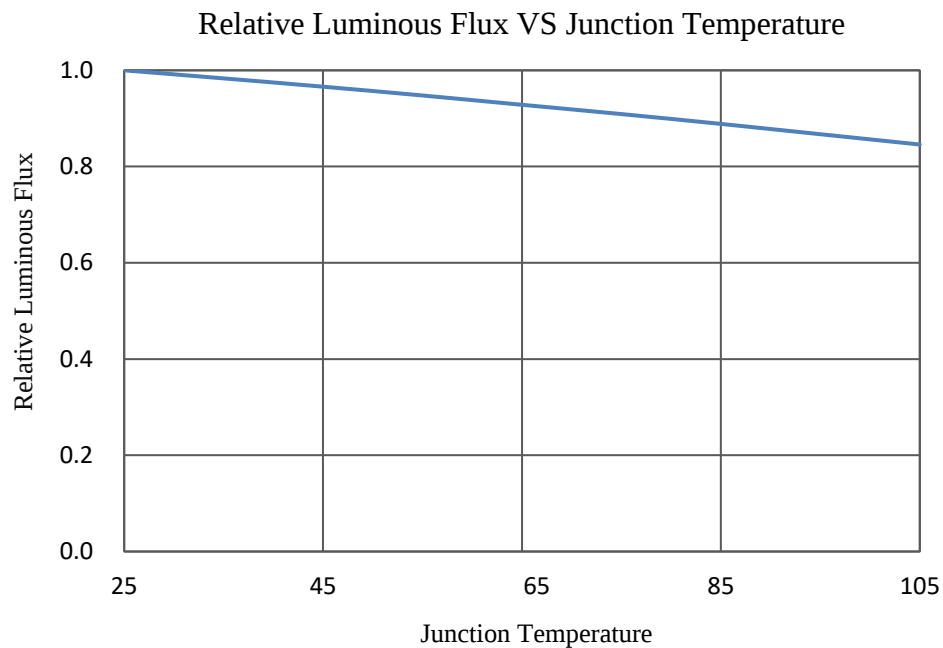
Relative Luminous Flux VS Forward Current



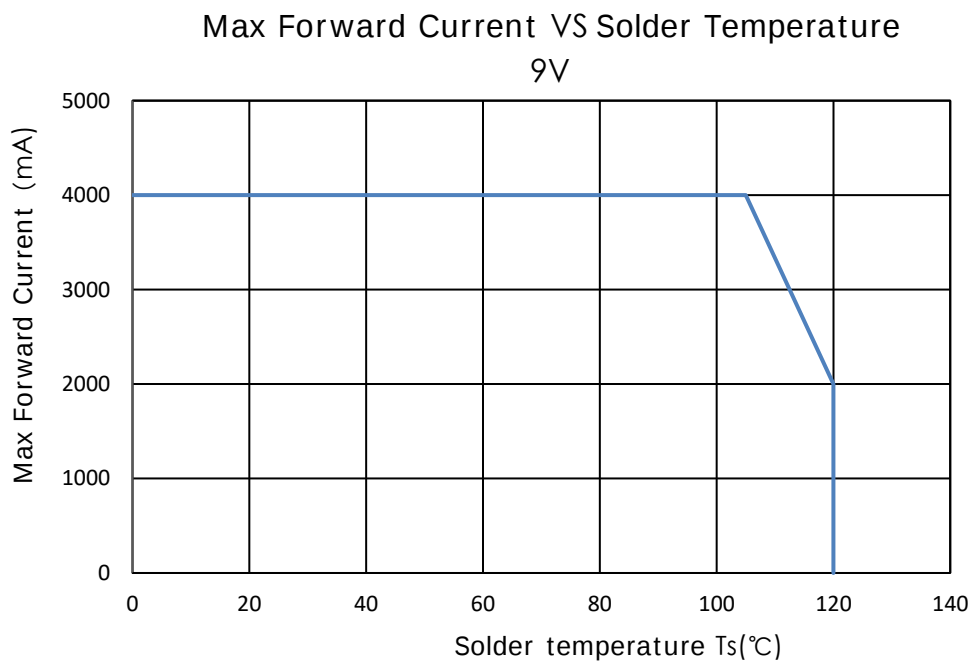
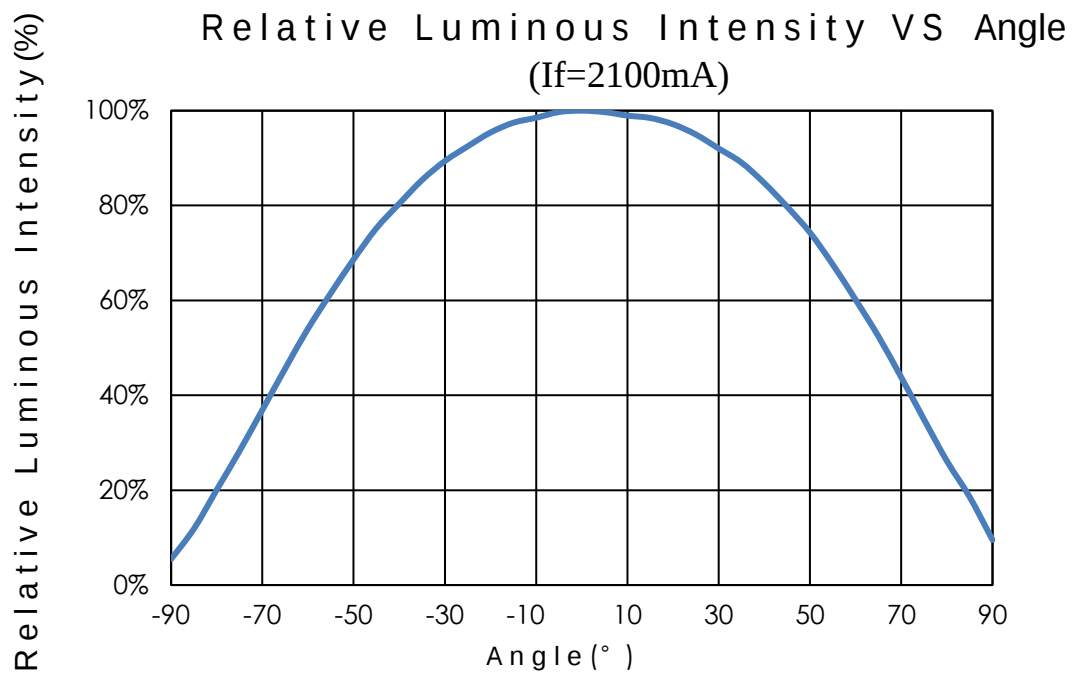
Forward Voltage VS Forward Current (6V)



Product characteristics curve



Product characteristics curve

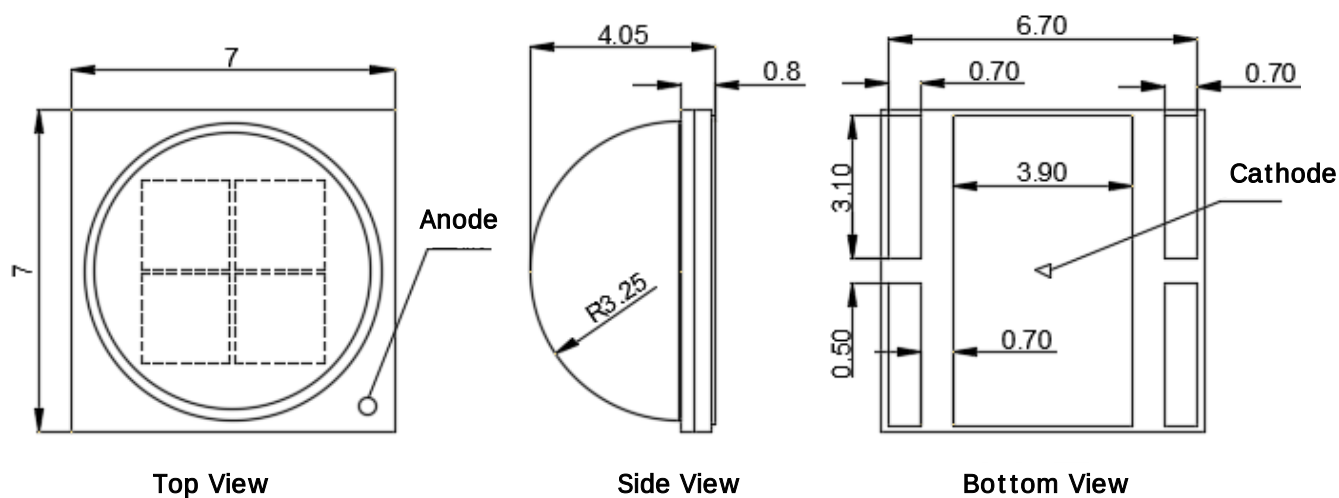


Notes :

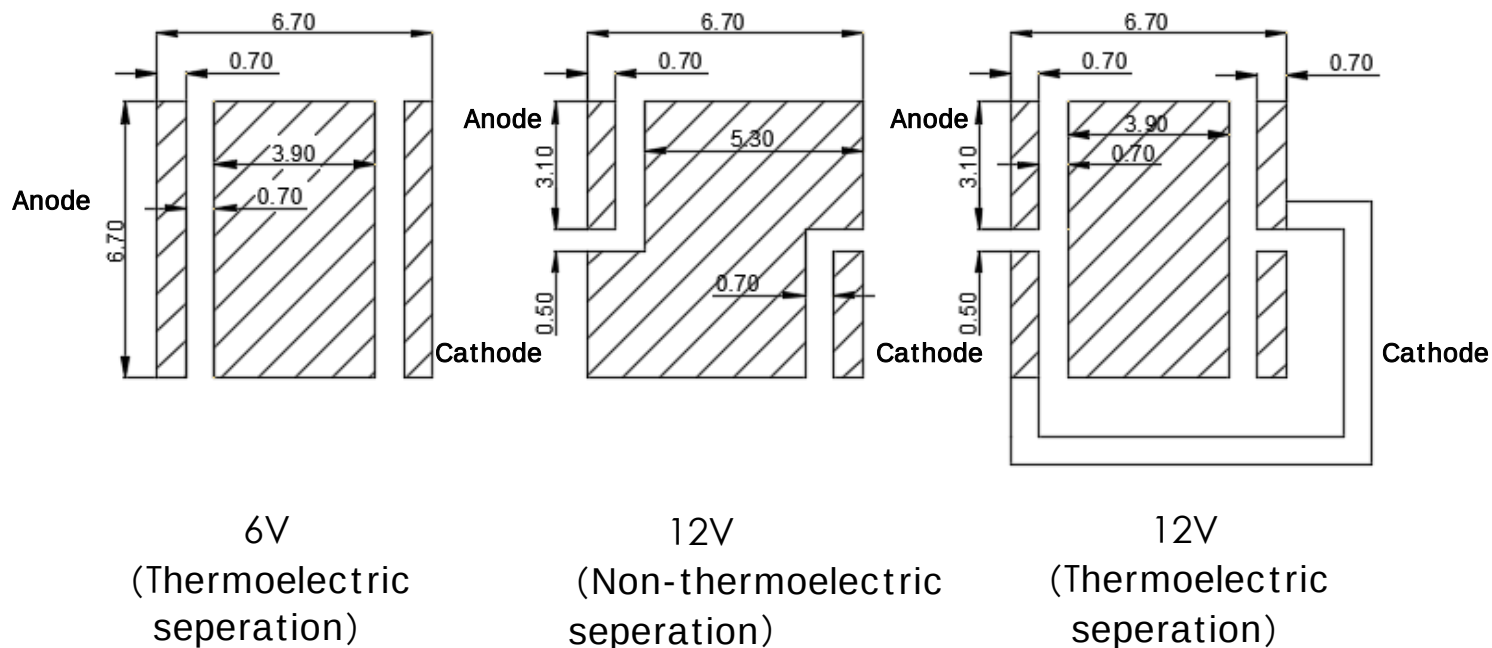
$I_f=6\text{V}$, Please ensure LEDs solder point temperature no more than 105 °C when driving current is 4000mA, otherwise, please lower driving current.

Tap and Reel

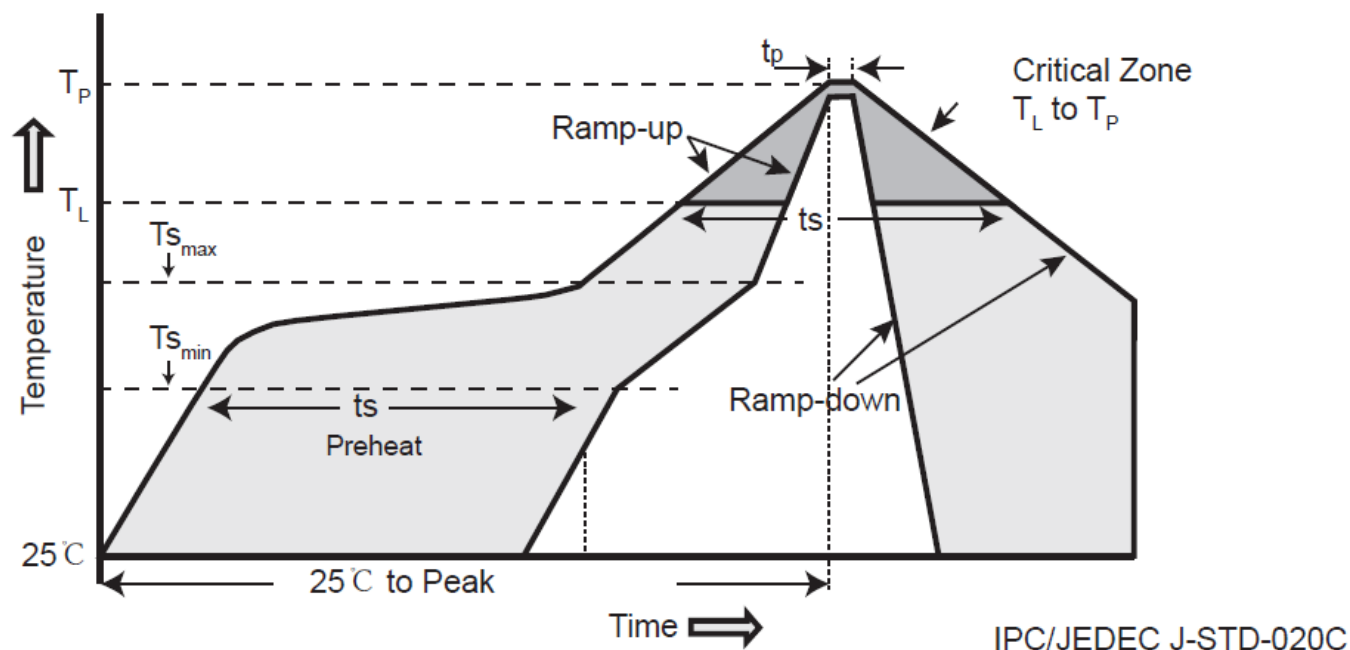
Dimension: mm, tolerance: ± 0.1



Recommended PCB Solder PAD



Recommended Reflow Profile

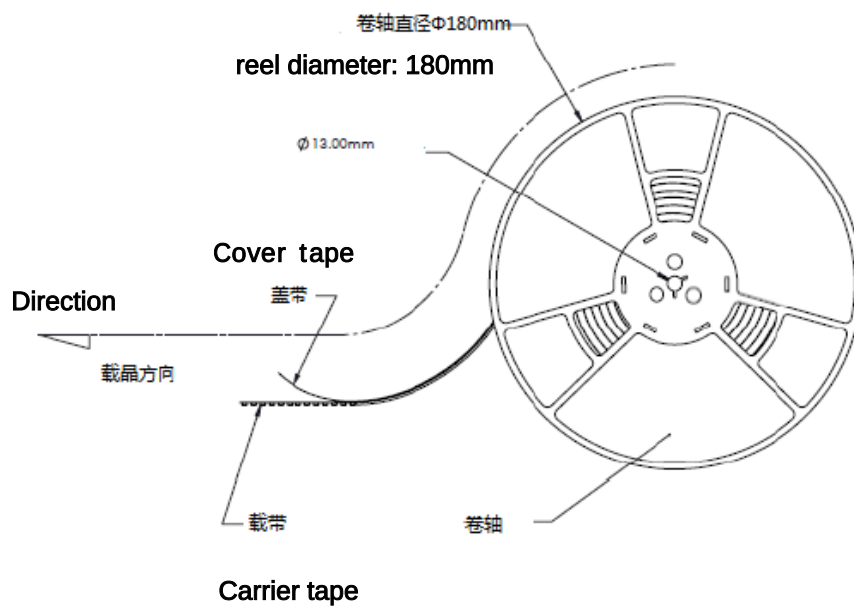
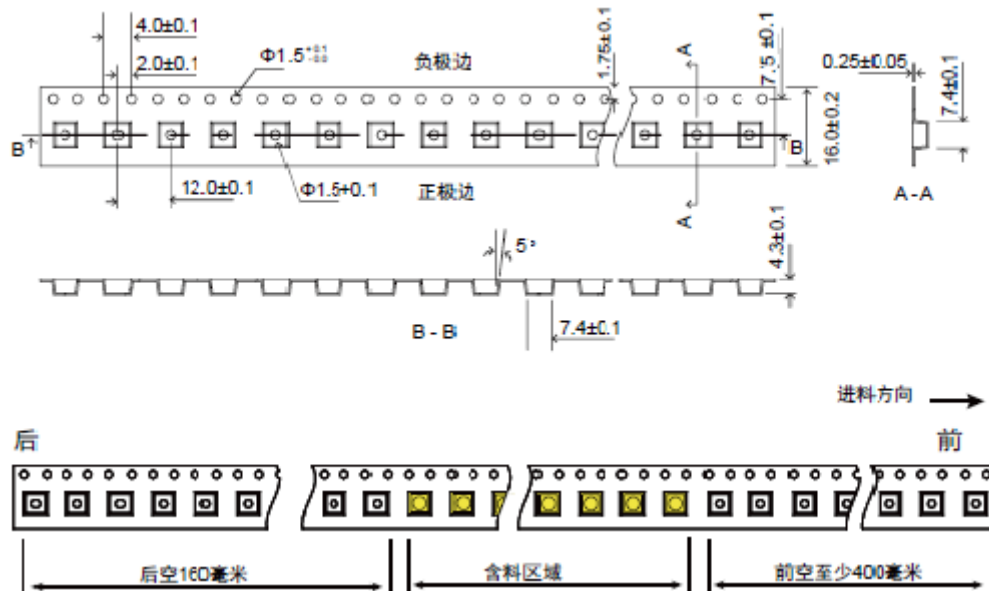


Profile Feature	Lead-Based Solder	Lead-Free Solder
Average Ramp-Up Rate (T_{smax} to T_p)	3°C/s Max.	3°C/s Max.
Preheat: Temperature Min (T_{smin})	100°C	150°C
Preheat: Temperature Max (T_{smax})	150°C	200°C
Preheat Time(T_{smin} to T_{smax})	60-120s	60-180s
Time Maintain Above: Temperature (T_L)	183°C	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)	6°C/s Max.	6°C/s Max.
Time 25 °C to peak Temperature	6minutes Max.	8minutes Max

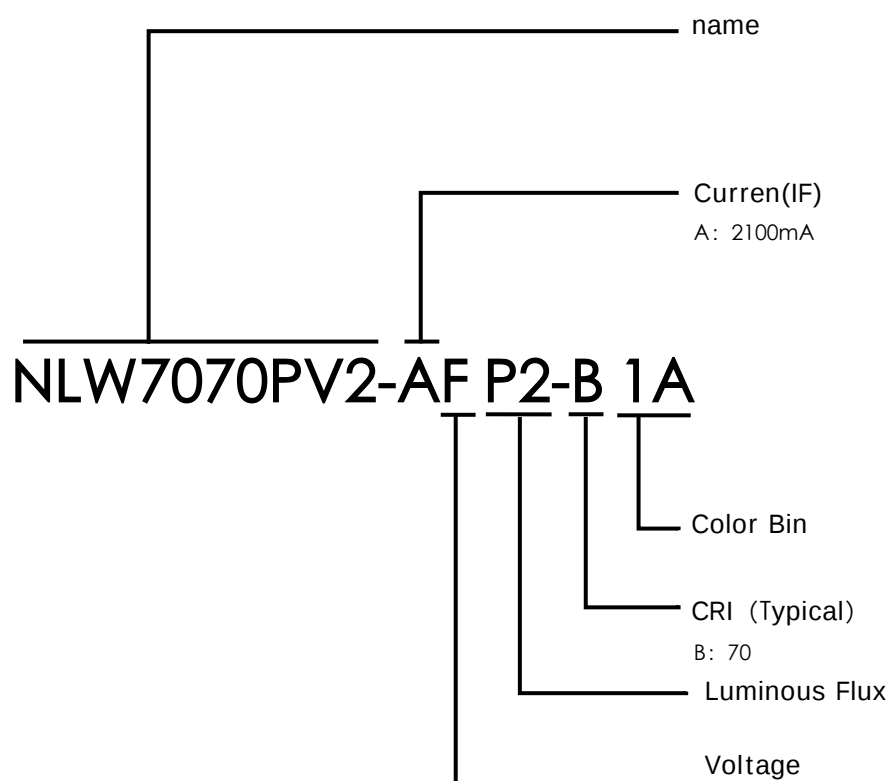
Notes : 1. Temperature distribution characteristics refer to IPC/JEDEC J-STD-020C.

Reel: SPQ:300pcs/reel, MPQ: 50pcs/reel.

Unit: mm, tolerance: ± 0.1



Product name description



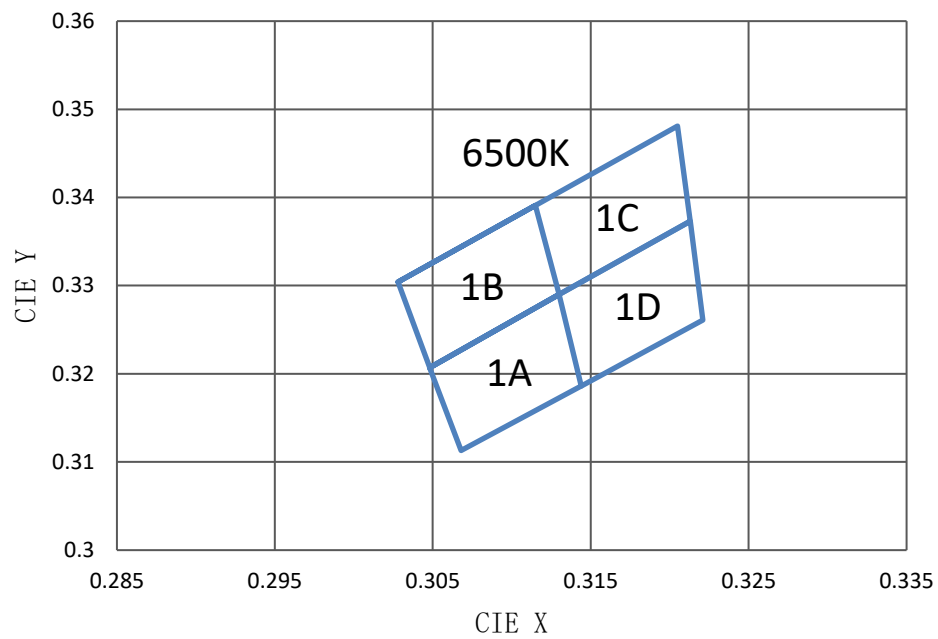
Luminous Flux binning

Group Code	Min	Max
P2	1830	1965
P4	1965	2100
Q2	2100	2260

Voltage binning

Voltage	Min	Max
F	5.2	5.7
G	5.7	6.2
H	6.2	6.7

Color Group Description



Tolerance: ± 0.007 on chromaticity (CCx, CCy)

Test Time: 20ms

Ambient Temperature: 25

Performance Groups–Chromaticity

Code	Bin Code	x	y
E1	1A	0.3048	0.3207
		0.3028	0.3304
		0.3115	0.3391
		0.313	0.329
	1B	0.313	0.329
		0.3115	0.3391
		0.3205	0.3481
		0.3213	0.3373
	1C	0.3144	0.3186
		0.313	0.329
		0.3213	0.3373
		0.3221	0.3261
	1D	0.3068	0.3113
		0.3048	0.3207
		0.313	0.329
		0.3144	0.3186

Performance Groups—Chromaticity :

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

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



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