



SPECIFICATION 产品规格书

Part No 品號: N0D19S29

◆ **Outline (L*W*H) : 1.6*1.5*0.6mm**

◆ **Specification: B3A05B02YZ000**

APPROVED SIGNATURES

顧客確認

SPECIFICATION FOR APPROVAL



2、Table of contents

2、Contents	2
3、Feature	3
4、Product Identification Code	3
5、Electrical-Optical Characteristics	3
6、Range of bins	4
7、Optical Characteristics	5/6
8、Outline Dimensions	7
9、Reflow Profile	8
10、Test circuit and handling precautions	9
11、Test items and results of reliability	10
12、Judgment criteria of failure for the reliability	10
13、Packing	11/12
14、Revision History	13



3、Features

- § forward current $\leq 30\text{mA}$
- § Wide viewing angle: 140°
- § Operating Temperature $-40\sim 80^\circ\text{C}$
- § Storage temperature $-40\sim 100^\circ\text{C}$
- § ROHS and REACH-compliant
- § Junction Temperature 110°C
- § PACKAGE: 3000 PCS/REEL.
- § Qualified according to JEDEC moisture level Level 3
- § Chip material: AlGaInP/ InGaN
- § Reverse Voltage: 5V
- § Duty 1/10 · Pulse Width 0.1ms
- § Single Chip Pulsed Forward Current. 100mA

4、Electrical-Optical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Value						Unit	Test condition
		Red			Blue				
		Min.	Typ	Max.	Min.	Typ	Max.		
Forward Voltage	V_f	1.3	1.7		2.5	2.9		V	$I_f=5\text{mA}$
Luminous intensity	I_v		25			25		mcd	$I_f=5\text{mA}$
Wavelength	λ (& λ_d)		625			470		(nm)	$I_f=5\text{mA}$
Reverse Current	I_r			10			10	μA	$V_r=5\text{V}$
Viewing angle	$2\theta_{1/2}$		140			140		Deg	$I_f=5\text{mA}$

1. Luminous intensity (IV) $\pm 15\%$, Forward Voltage (VF) $\pm 0.1\text{V}$, Wavelength(λ_d) $\pm 1\text{nm}$

2. IS standard testing

**5、 Range of bins**

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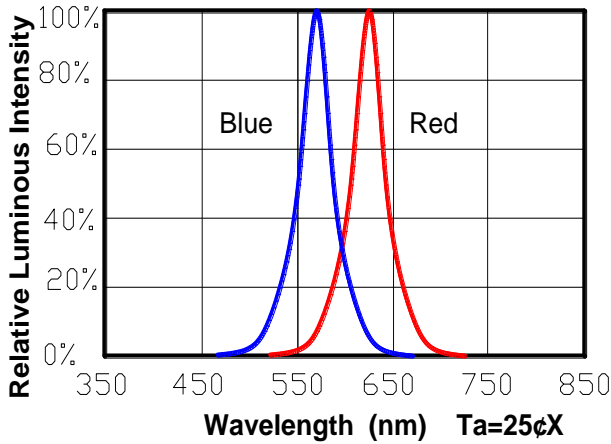
Forward Voltage Rank Combination (IF=5mA)				
Rank Code		Min.	Max.	Unit
Red	□	1.3	2.2	V
Blue	e	2.5	2.8	
	f	2.8	3.1	
	g	3.1	3.4	
Luminous Intensity Rank Combination (IF=5mA)				
Rank Code		Min.	Max.	Unit
Red	A	12.5	16	mcd
	B	16	20	
	C	20	25	
	D	25	32	
	E	32	40	
	F	40	50	
Blue	A	12.5	16	
	B	16	20	
	C	20	25	
	D	25	32	
	E	32	40	
	F	40	50	
Dominant wavelength Rank Combination (IF=5mA)				
Rank Code		Min.	Max.	Unit
Red	t	620	625	nm
	u	625	630	
Blue	G	465	467.5	
	H	467.5	470	
	I	470	472.5	
	J	472.5	475	



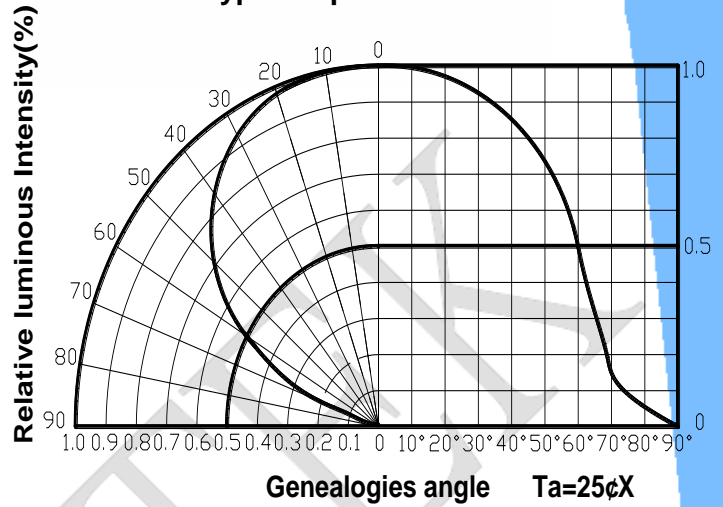
6、Optical Characteristics-1

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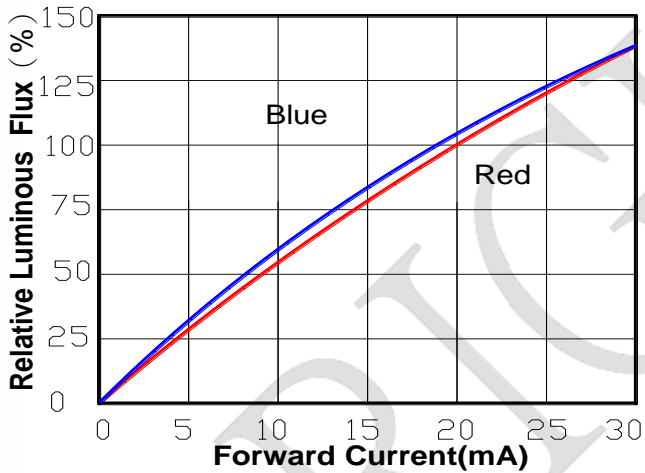
Relative Spectral Distribution



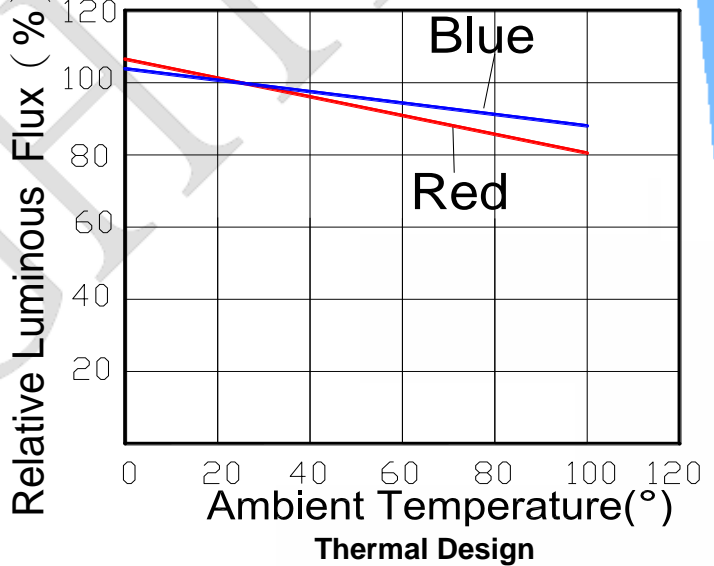
Typical Spatial Distribution



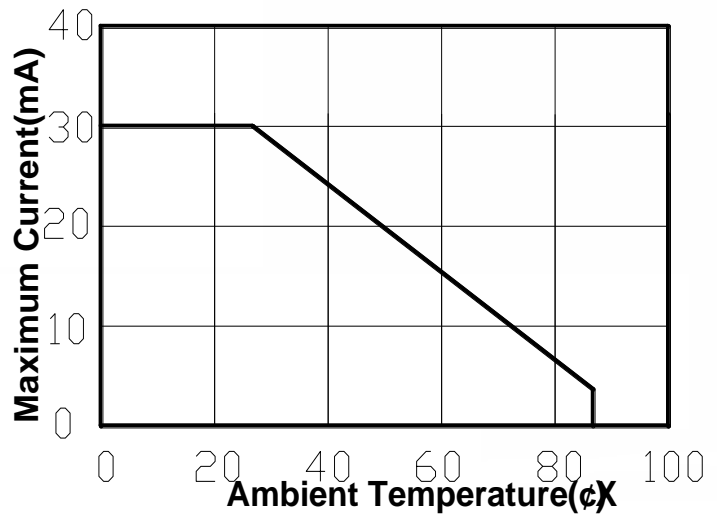
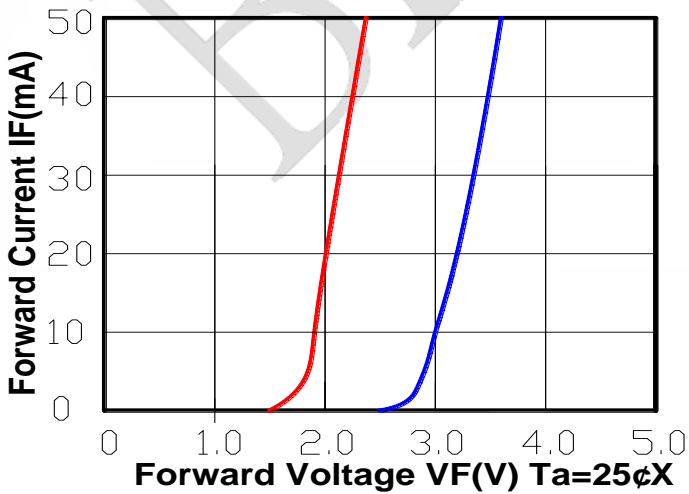
Relative Luminous Flux .Current Ta=25



Relative Luminous Flux .Ambient Temperature



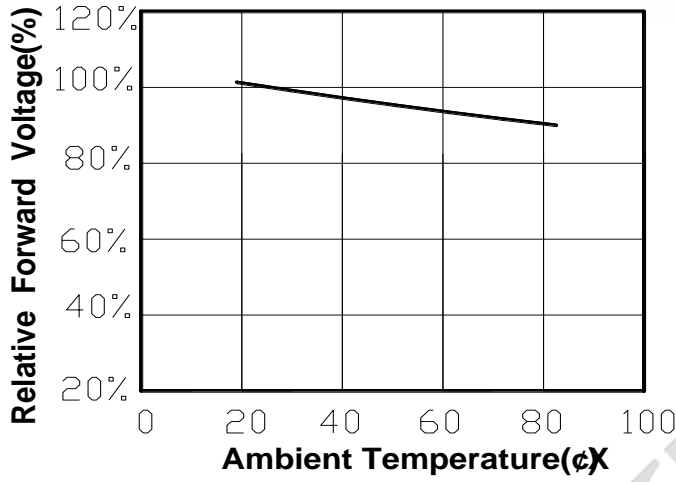
Electrical Characteristics



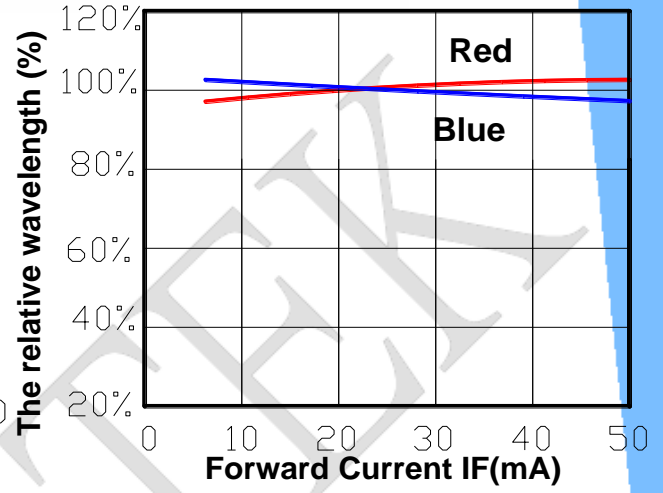


7、Optical Characteristics-2

Forward Voltage Temperature



Wavelength and current

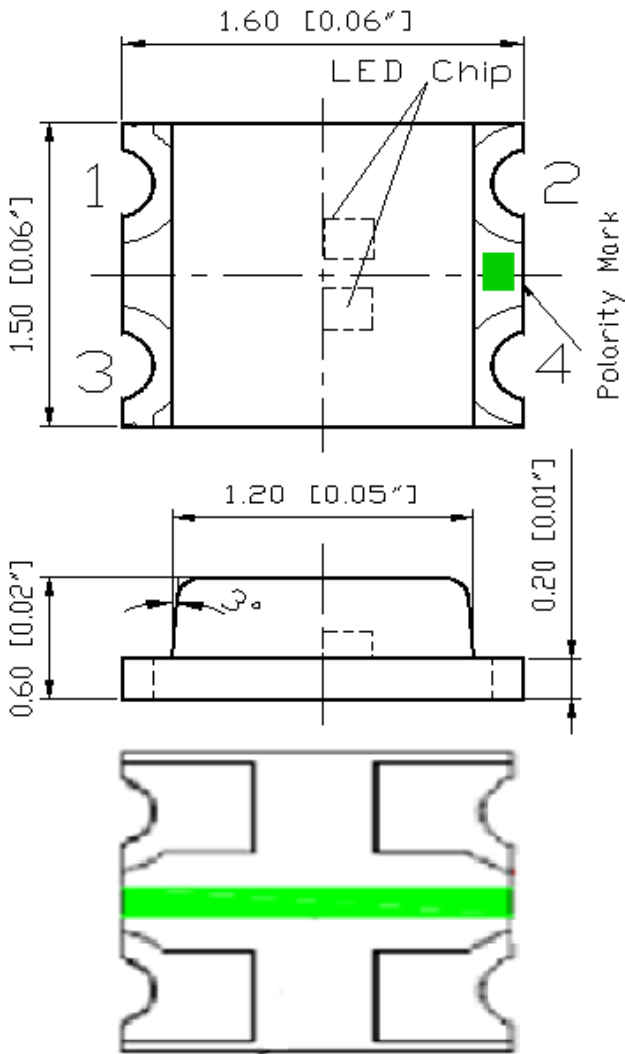


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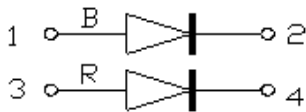
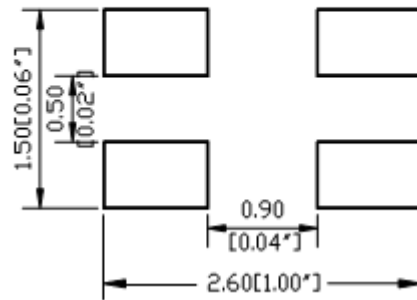
BRIGHTTEK



8、 Outline Dimensions



RECOMMEND PAD LAYOUT



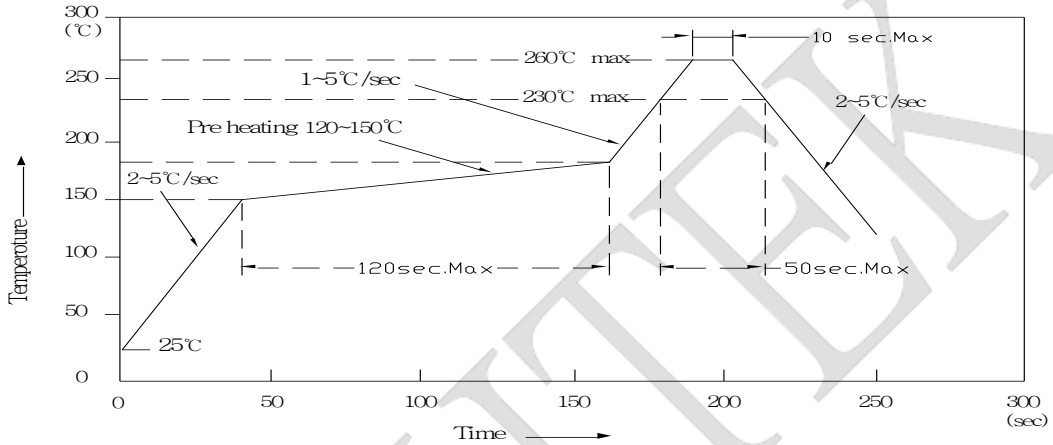
- § All dimensions are in millimeters (inches) .
- § Tolerance is ± 0.25 (0.010) mm unless otherwise noted.
- § Specifications are subject to change without notice.



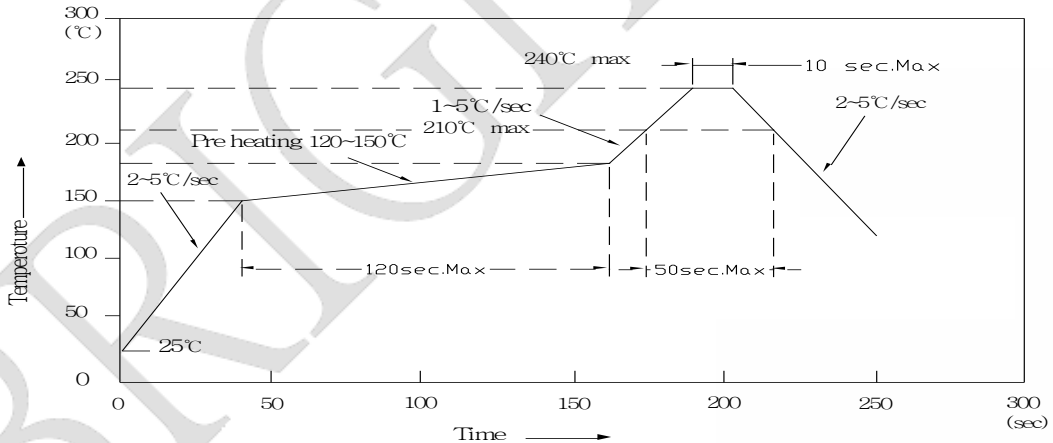
9、Reflow Profile

■ Reflow Temp/Time

IR Reflow Soldering Profile
Lead Free Solder



IR Reflow Soldering Profile
Lead Solder



NOTES:

1. We recommend the reflow temperature 245°C(±5°C).the maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy/silicone resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

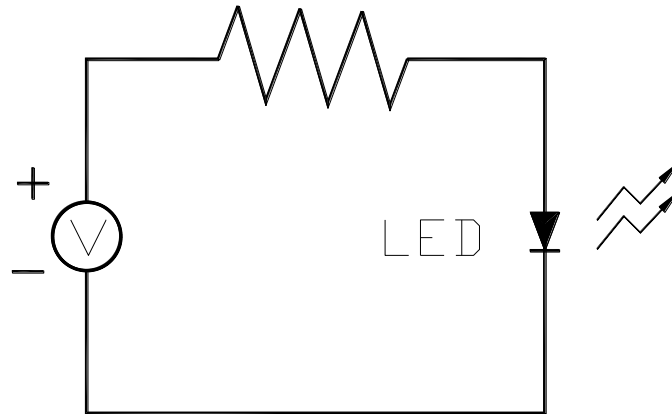
■ Soldering iron

Basic spec is ≤ 5sec when 260°C.If temperature is higher, time should be shorter (+10° -1sec).Power dissipation of iron should be smaller than 15W, and temperatures should be controllable .Surface temperature of the device should be under 230°C



10 Test circuit and handling precautions

■ Test circuit



■ Handling precautions

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2.Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature : 5°C30°C(41°F86°F)

2.2 Shelf life in sealed bag: 12 month at <5°C30°C and <30% R.H. after the package is

Opened, the products should be used within a week or they should be keeping to stored at \leq 20 R.H. with zip-lock sealed.

3.Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings:

3.1 60±3°C(12~24hrs) and <5%RH, taped reel type

3.2 100±3°C(45min~1hr), bulk type

3.3 130±3°C(15~30min), bulk type

**11、 Test items and results of reliability**

Type	Test Item	Test Standard	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	JEITA ED-4701 300 303	-40°±30min ↑↓5 min 100°±30min	100 cycle	0/50
	Thermal Shock	JEITA ED-4701 200 303	-10°±15min ↑↓5sec 100°±15min	20 cycle	0/22
	High Temperature Storage	JEITA ED-4701 200 201	T _a =100°C	1000 hrs	0/22
	Humidity Heat Storage	JEITA ED-4701 100 103	T _a =60°C RH=90%	1000 hrs	0/22
	Low Temperature Storage	JEITA ED-4701 200 202	T _a =-40°C	1000 hrs	0/22
Operation Sequence	Life Test	Tested with Brighttek standard	T _a =25°C I _F =20mA	1000 hrs	0/22
	High Humidity Heat Life Test	Tested with Brighttek standard	60°±RH=90% I _F =10mA	500 hrs	0/22
	Low Temperature Life Test	Tested with Brighttek standard	T _a =-20°C I _F =20mA	1000 hrs	0/22

SPECIFICATION FOR APPROVAL

12、 Judgment criteria of failure for the reliability

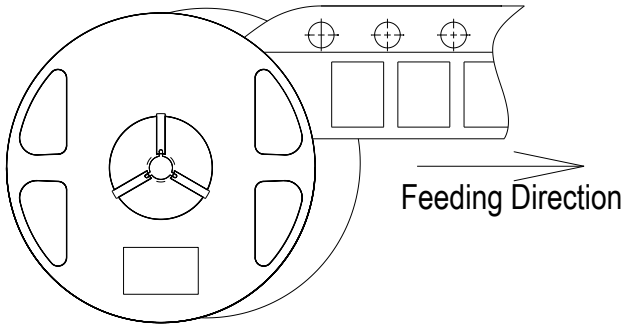
Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	V _f (V)	I _F =20mA	Over U×1.2
Reverse current	I _R (uA)	V _r =5V	Over U×2



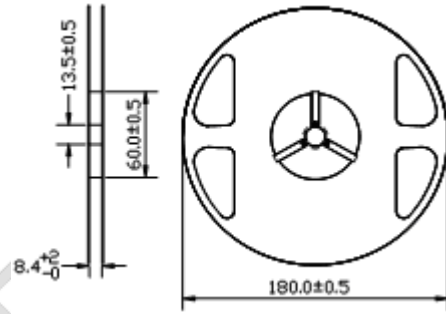
13、 Packing -1

0606 SMD Top LEDs Packaging Specifications

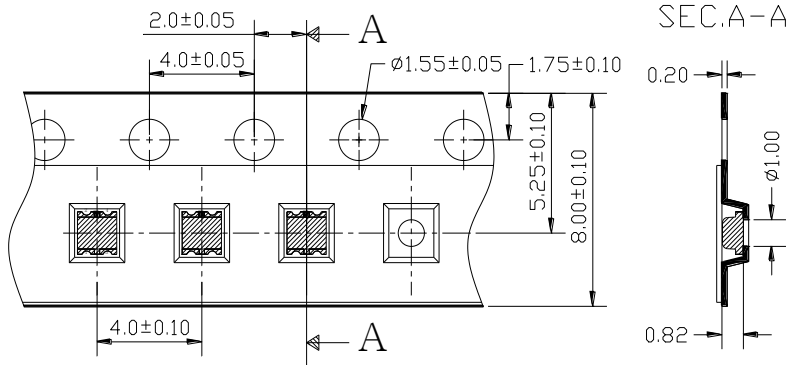
● Feeding Direction



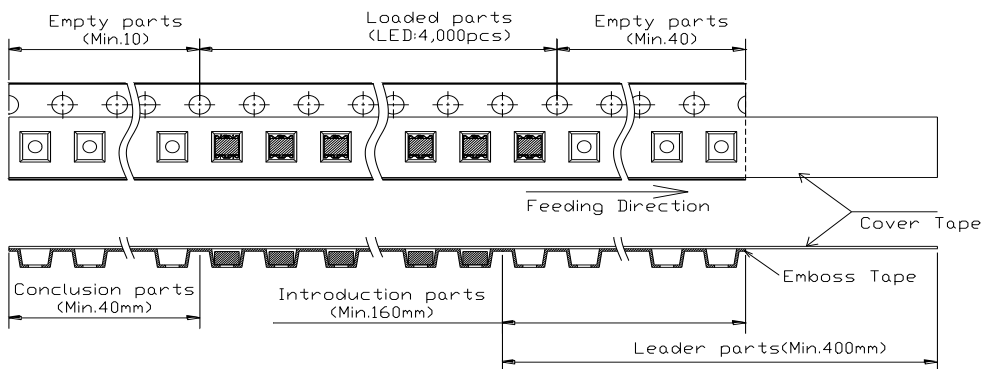
● Dimensions of Reel (Unit: mm)



● Dimensions of Tape (Unit: mm)



● Arrangement of Tape



NOTES

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications;
4. 4,000pcs/Reel

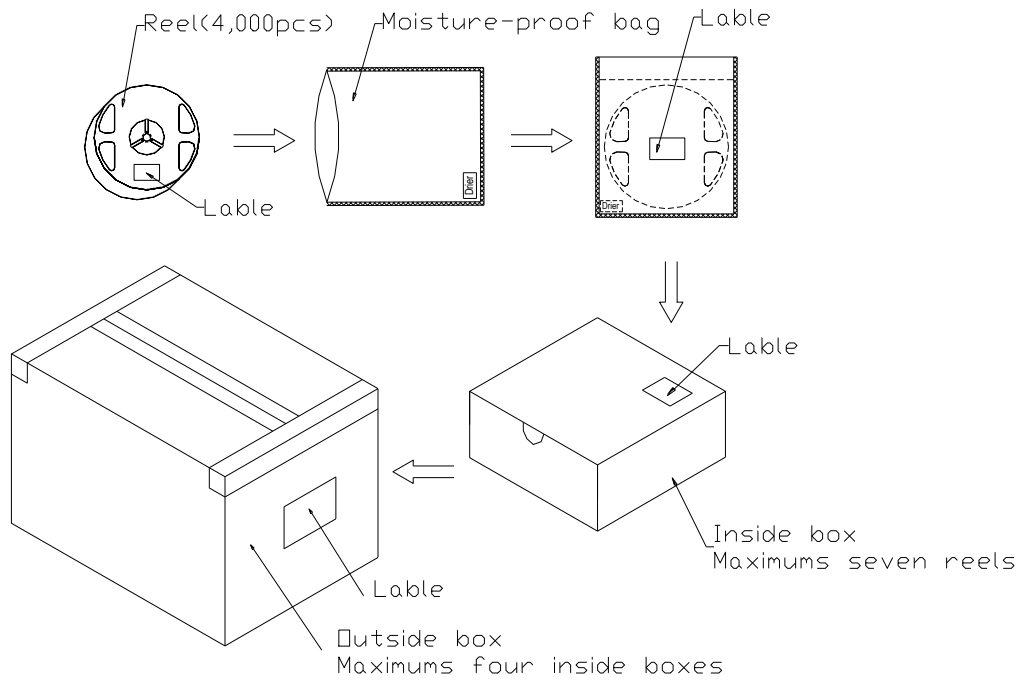
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13、 Packing -2

0606 Single-Color High Performance SMD Top LEDs Packaging Specifications

- Packaging specifications



NOTES:

Reeled products (numbers of products are 4,000pcs) packed in a seal off moisture-proof bag along with a desiccant one by one, Seven moisture-proof bag of maximums (total maximum number of products are 28,000pcs) packed in an inside box (size: about 260mm x about 230mm x about 100mm) and four inside boxes of maximums are put in the outside box (size: about 480mm x about 275mm x about 215mm) Together with buffer material, and it is packed. (Part No., Lot No., quantity should appear on the label on the moisture-proof bag, part No. And quantity should appear on the label on the cardboard box.)

SPECIFICATION FOR APPROVAL

