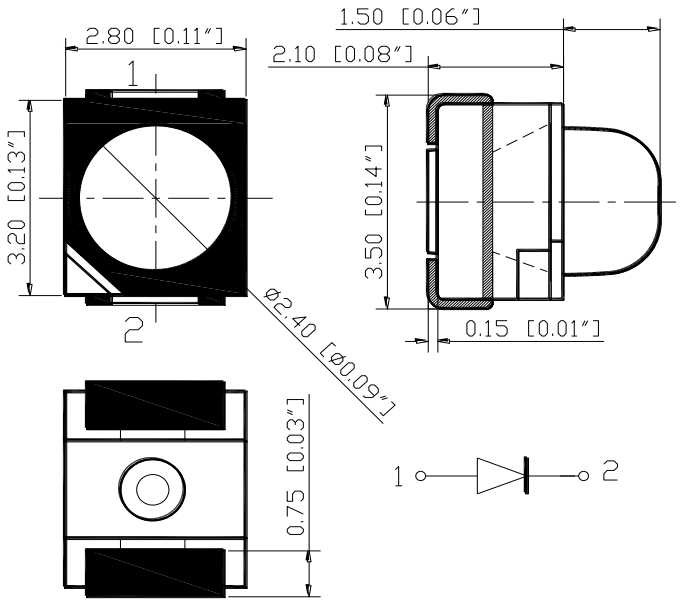
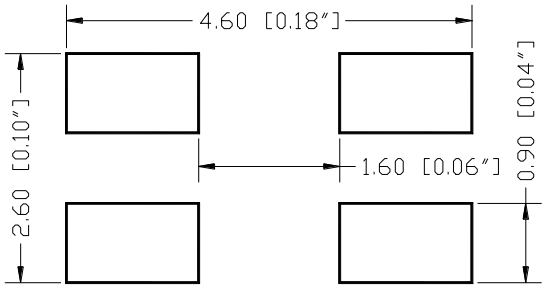
REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDs

Part Number: N0R18S25BS

Package outlines



RECOMMEND PAD LAYOUT



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

ITEM	MATERIALS
Resin	Epoxy
Lens color	Water transparent
Dice	AlGaInP
Emitted color	Yellow

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.2mm (0.008inch) unless otherwise noted.

Rev :	Date	Drawn by :	Checked by :	Approved by :
A	2015/04/20	唐云	李用基	黄靜文

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Part Number: N0R18S25BS

Absolute maximum ratings (T_A=25℃)

Parameter	Symbol	Value	Unit
Forward current	If	50	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	125	mW
Operating temperature range	Top	-40 ~+80	℃
Storage temperature range	Tstg	-40 ~+85	℃
Peak pulsing current (1/8 duty f=1kHz)	Ifp	125	mA

Electro-optical characteristics (T_A=25℃)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=50mA	λpeak	--	630	--	nm
Spectral half bandwidth	If=50mA	△λ	--	19	--	nm
Dominant wavelength	If=50mA	λdom	615	620	630	nm
Forward voltage	If=50mA	Vf	2.2	2.8	3.2	V
Luminous intensity	If=50mA	Iv	6800	11000	18000	mcd
Viewing angle at 50% Iv	If=10mA	2θ1/2	--	30	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

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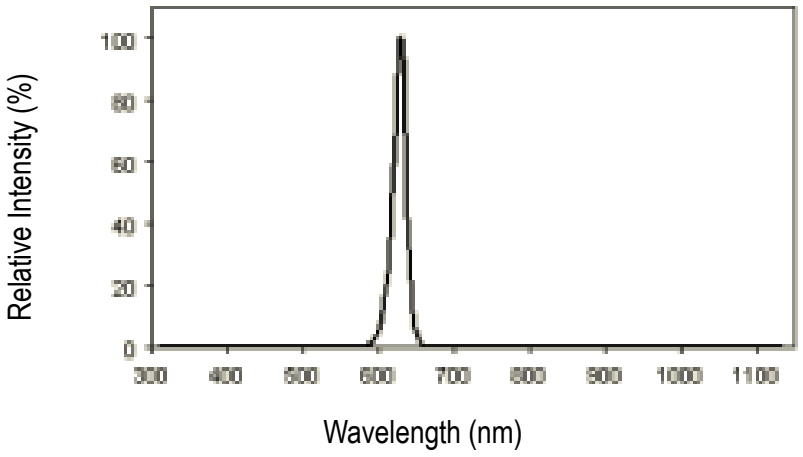
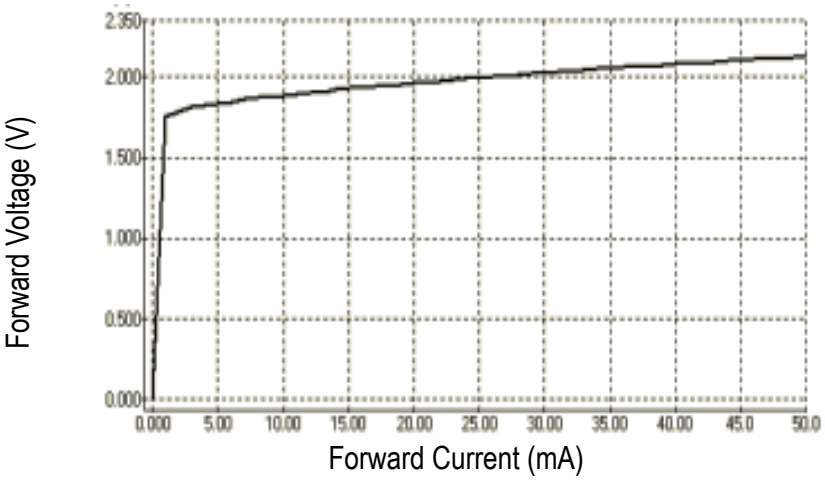
OPTICAL CHARACTERISTIC CURVES

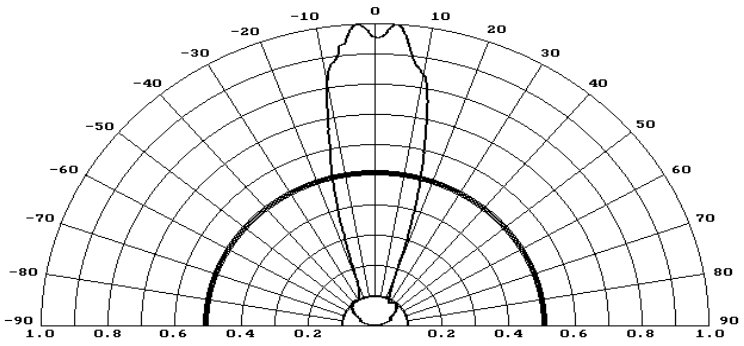
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

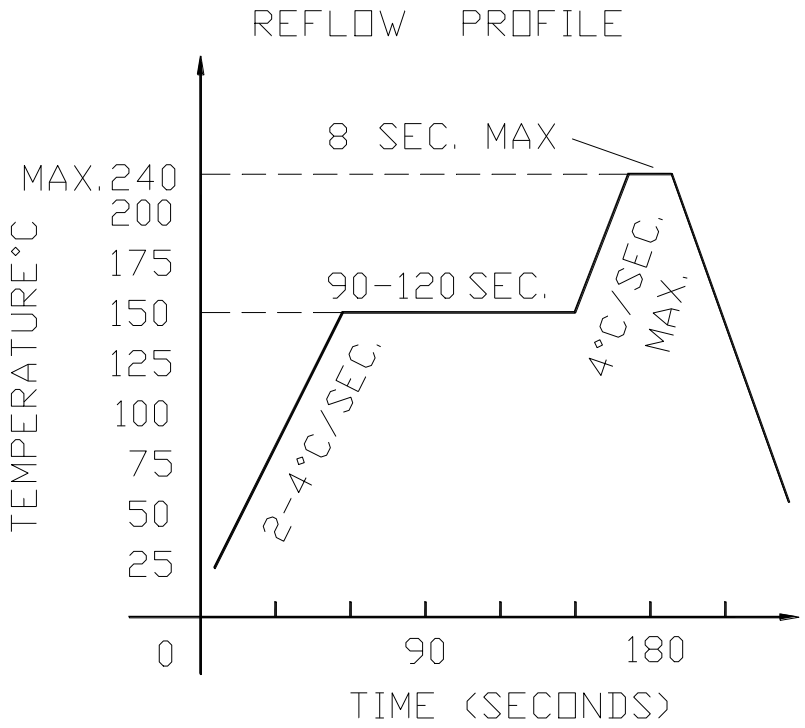


Directive Characteristics



Reflow Profile

■ Reflow Temp/Time

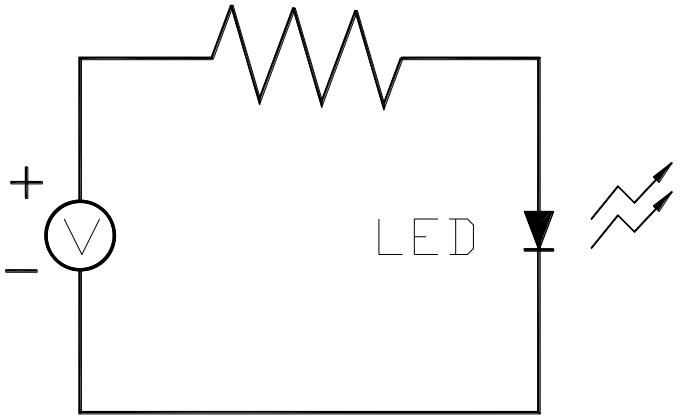


■Soldering iron

Basic spec is ≤ 5sec when 260℃. If temperature is higher, time should be shorter (+10℃→ -1sec).Power dissipation of iron should be smaller than 20W, and temperatures should be controllable .Surface temperature of the device should be under 230℃ .

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. Shelf life in sealed bag: 12 month at 5℃~30℃ and < 60% R.H;

3. After the package is Opened:

3.1. It is recommended to baking before the first use:

Baking condition:

a. 60±3℃ x (36~48hrs) and < 5%RH, taped reel type ;

b. 110±3℃ x (8~16hr), bulk type ;

3.2 The products should be used within a week or they should be keeping to stored at ≦20 R.H. with zip-lock sealed:

a. It is recommended to baking before soldering when the pack is unsealed after 72hrs ;

b. Baking condition as 3.1 baking condition.

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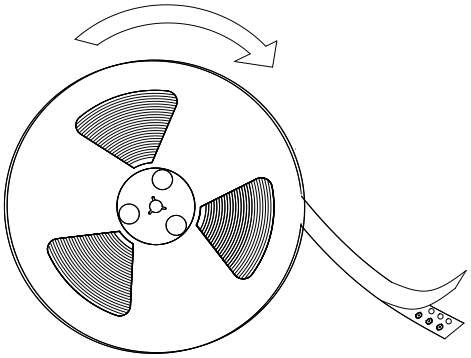
Test items and results of reliability

Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20℃ 30min ↑ ↓ 80℃ 30min	100 cycle	0/22
	Thermal Shock	-20℃ 15min ↑ ↓ 80℃ 15min	100 cycle	0/22
	High Humidity Heat Cycle	30℃⇔ 65℃ 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	T_a=80℃	1000 hrs	0/22
	Humidity Heat Storage	T_a=60℃ RH=90%	1000 hrs	0/22
	Low Temperature Storage	T_a=-30℃	1000 hrs	0/22
Operation Sequence	Life Test	T_a=25℃ I_F=20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60℃ RH=90% I_F=10mA	500 hrs	0/22
	Low Temperature Life Test	T_a=-20℃ I_F=20mA	1000 hrs	0/22

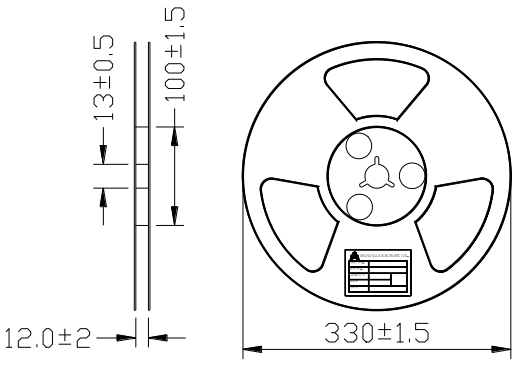
PACKAGING SPECIFICATIONS

2031+Lens Packaging Specifications

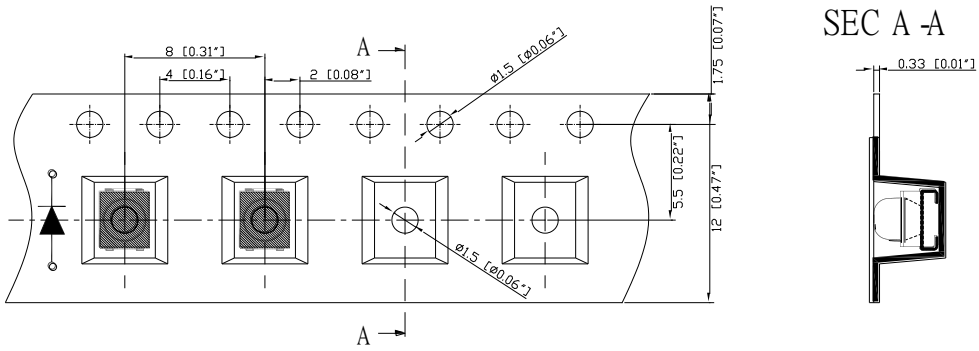
- **Feeding Direction**



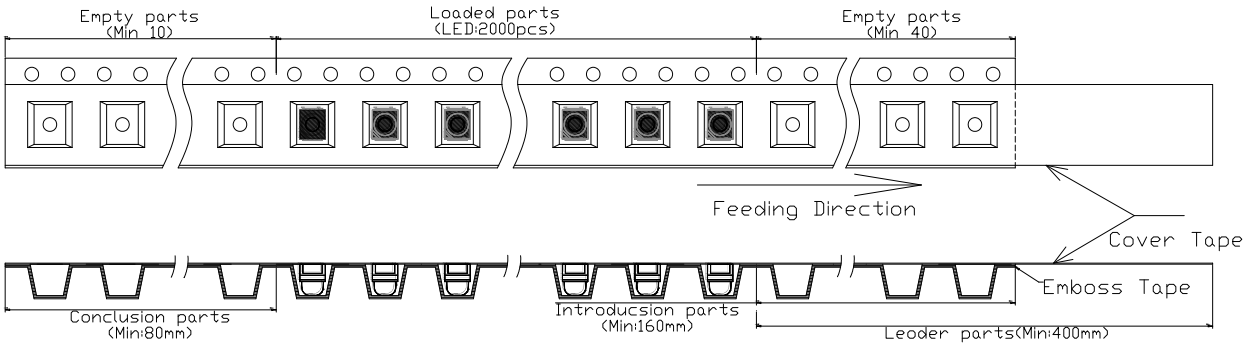
- **Dimensions of Reel (Unit: mm)**



- **Dimensions of Tape (Unit: mm)**



- **Arrangement of Tape**

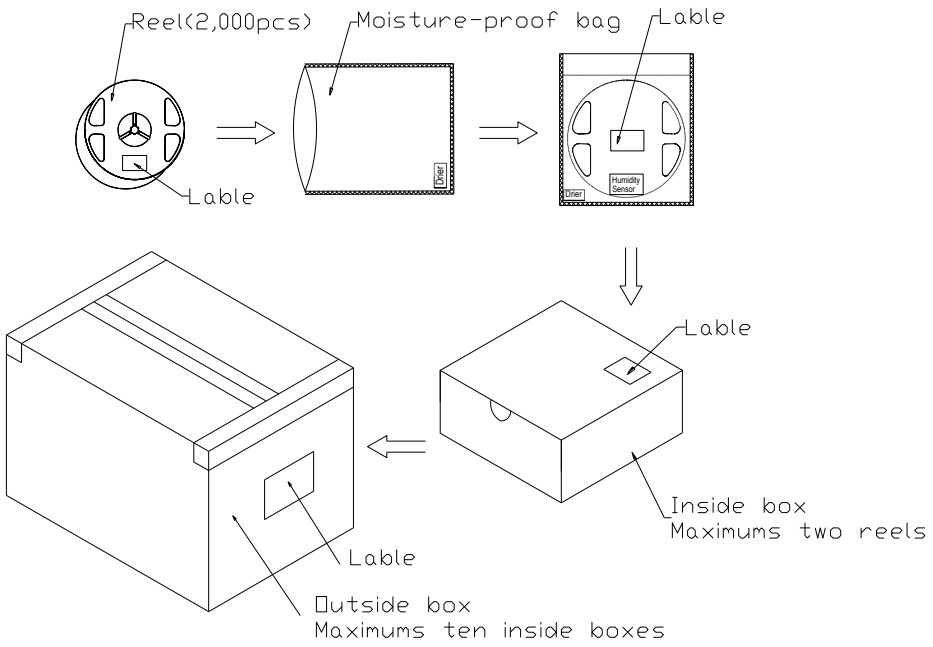


NOTES

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;
4. 2,000pcs/Reel

2031+Lens Packaging Specifications

- **Packaging specifications**



NOTES:

Reeled products (numbers of products are 2,000pcs) packed in a seal off moisture-proof bag along with a desiccant one by one and with a Humidity-Sensor one by one, Two moisture-proof bag of maximums (total maximum number of products are 4,000pcs) packed in an inside box (size: about 380mm x about 380mm x about 52mm) and ten inside boxes of maximums are put in the outside box (size: about 398mm x about 398mm x about 398mm) 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.) The number of the loading steps of outside box (cardboard box) has it to three steps.

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Forward Voltage Rank Combination (IF=50mA)

Rank	Min.	Max.	Unit
□	2.2	3.2	V

Luminous Intensity Rank Combination (IF=50mA)

Rank	Min.	Max.	Unit
b	6800	8800	mcd
c	8800	11200	
d	11200	14200	
e	14200	18000	

Dominant wavelength Rank Combination (IF=50mA)

Rank	Min.	Max.	Unit
s	615	620	nm
t	620	625	
u	625	630	

Group Name on Label (Example DATA: □ct 50)

DATA: □ct 50	Vf(V)	Iv (mcd)	λd (nm)	Test Condition
□→c→t→50	2.2~3.2	8800~11200	620~625	IF=50mA

* NOTE:

1. The tolerance of luminous intensity (Iv)is ±15%.
2. The tolerance of dominant wavelength is ±1nm.
3. This specification is preliminary.