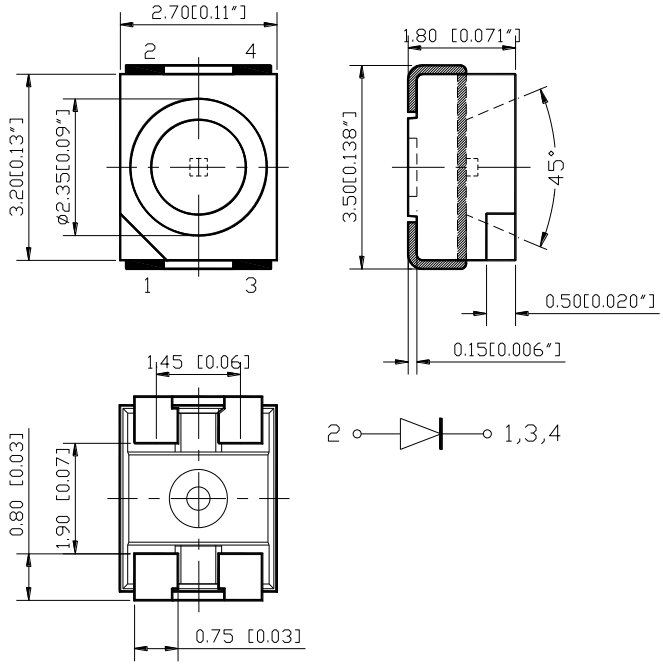
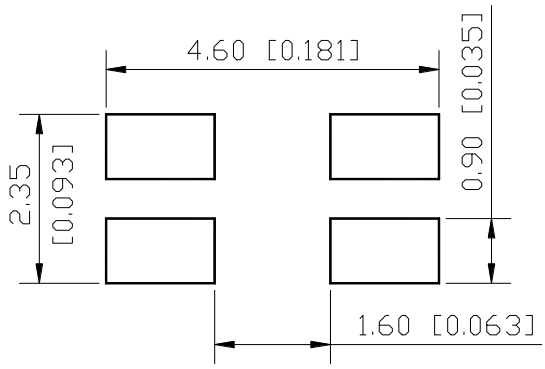
BRIGHTEK OPTOELECTRONICS
INFRARED EMITTING DIODE

Part Number: N0F18S10

Package outlines



RECOMMEND PAD LAYOUT



ITEM	MATERIALS
Resin	Silicon
Lens color	Water transparent
Dice	AlGaAs/AlGaAs
Emitted color	Infrared

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	2012/11/30			

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Absolute maximum ratings (T_A=25℃)

Parameter	Symbol	Value	Unit
Power dissipation	Pd	180	mW
Peak forward current Pulse width 100μs, duty cycle =1%	Ifp	1	A
Continuous forward current	If	100	mA
Reverse voltage	Vr	5	V
Operating temperature range	Top	-40 ~+80	℃
Storage temperature range	Tstg	-40 ~+85	℃

Electro-optical characteristics (T_A=25℃)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Radiated intensity ＊1	If=100mA	Ie	5.60	7.30	8.60	mW/sr
Forward voltage	If=100mA	Vf	1.0	1.5	1.8	V
Peak wavelength	If=100mA	λ p	840	850	860	nm
Spectral bandwidth	If=100mA	△ λ	--	50	--	nm
Reverse current	Vr=5V	Ir	--	--	10	μA
View angle	If=10mA	2θ 1/2	--	120	--	Deg

＊1 Note: Luminous intensity tolerance is ±10% .

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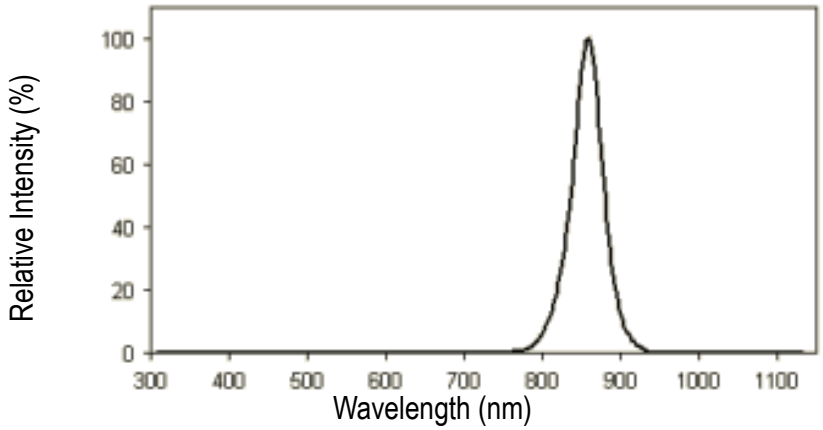
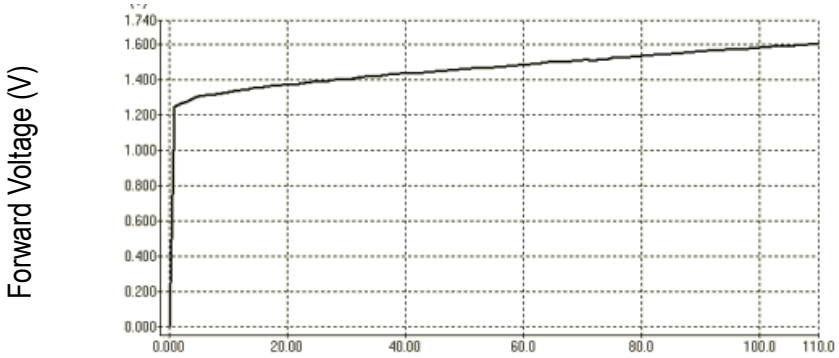
OPTICAL CHARACTERISTIC CURVES

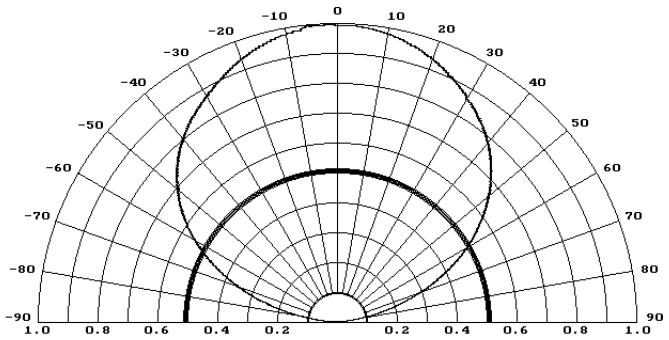
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

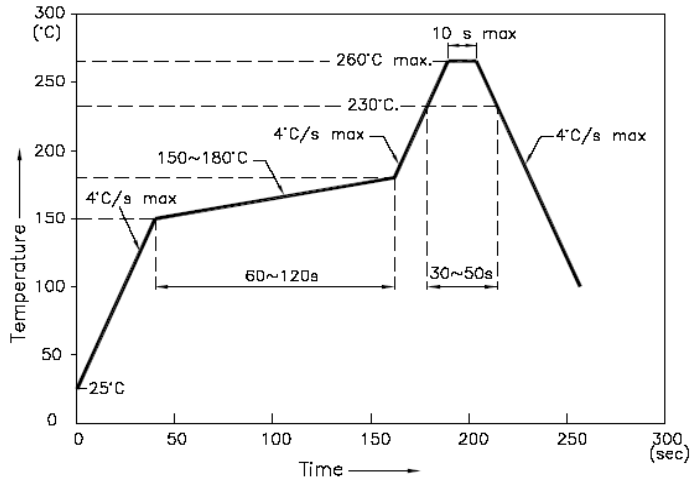


Directive Characteristics



Reflow Profile

■ Reflow Temp/Time



NOTES:

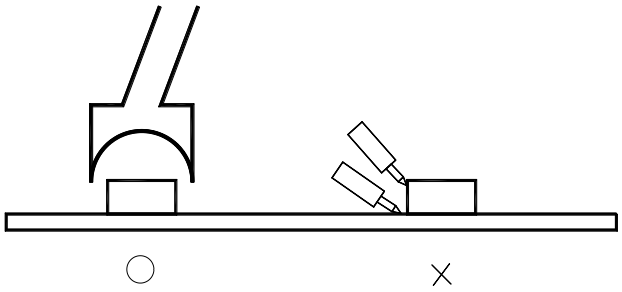
1. We recommend the reflow temperature 245℃(±5℃).the maximum soldering temperature should be limited to 260℃.
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■Soldering iron

Basic spec is ≤ 5sec when 260℃. 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℃ .

■Rework

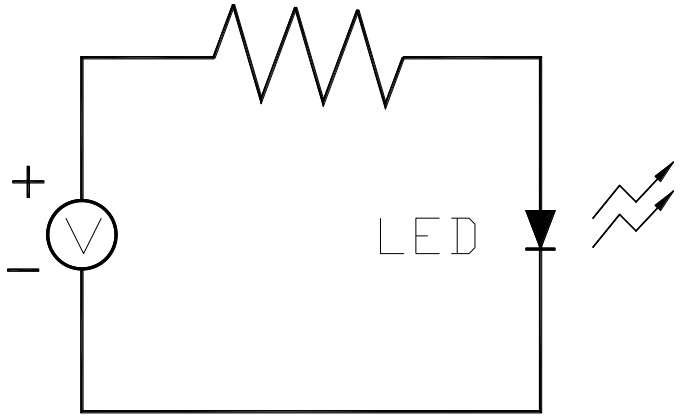
1. Customer must finish rework within 5 sec under 260℃.
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.



■ **Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.**

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 months at 5°C~30°C 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°C x (36~48hrs) and ＜5%RH, taped reel type；

b. 110±3°C x (8~16hr), bulk type；

3.2 The products should be used within a week:

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

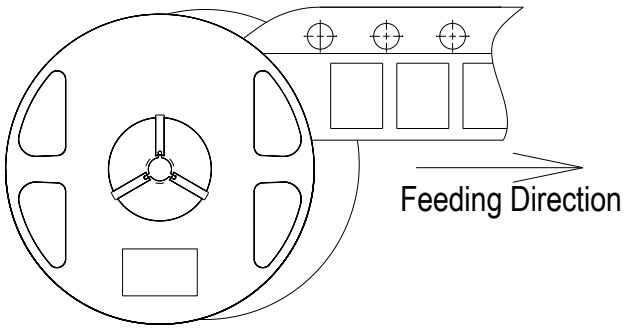
b. Baking condition as 3.1 baking condition.

Test items and results of reliability

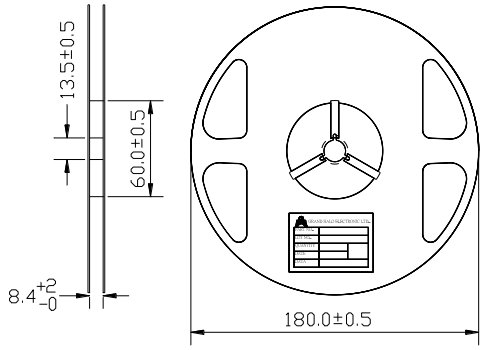
Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20℃ 30min ↑ ↓ 80℃ 30min	100 cycle	0/22
	Thermal Shock	-20℃ 15min ↑ ↓ 80℃ 15min	100 cycle	0/22
	High Humidity Heat Cycle	30℃⇔65℃ 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	T_a=80℃	1000 hrs	0/22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

High Performance SMD Top LEDs Packaging Specifications

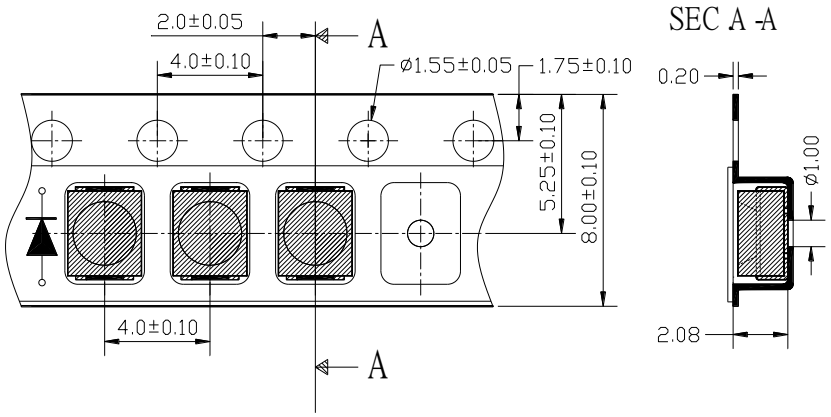
- **Feeding Direction**



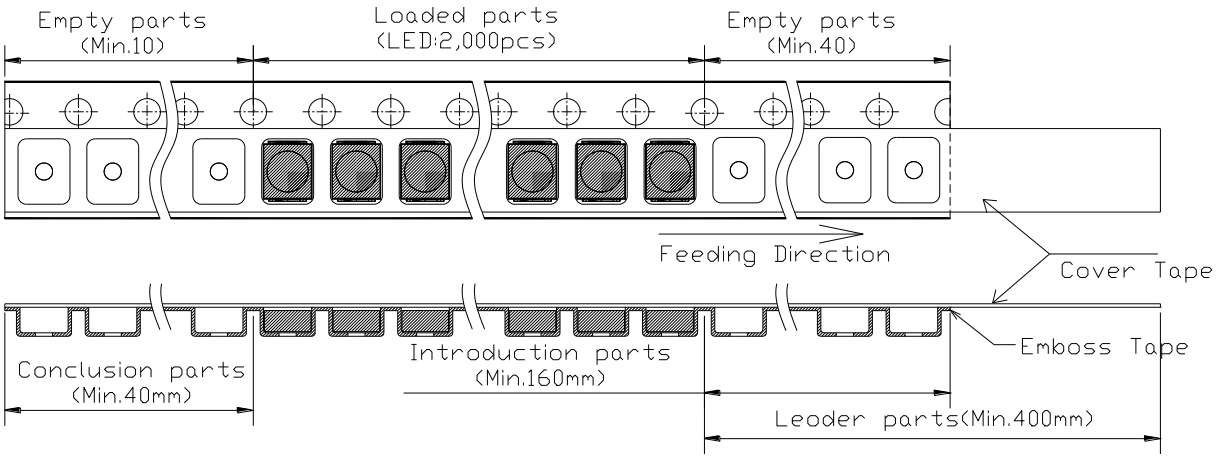
- **Dimensions of Reel (Unit: mm)**



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



- **Arrangement of Tape**

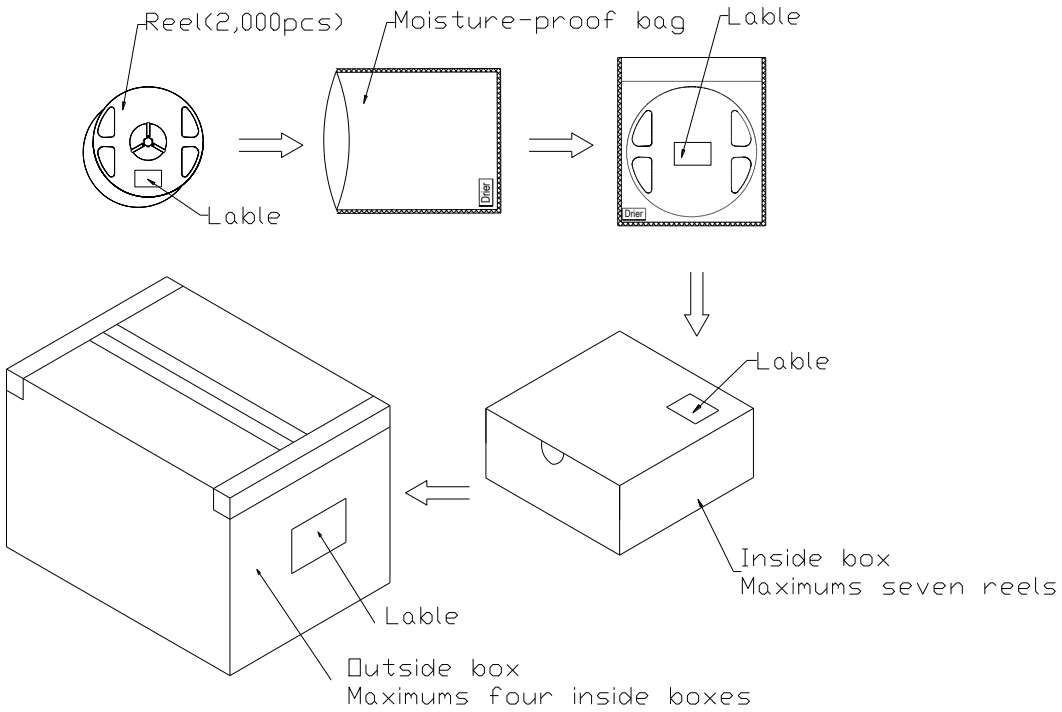


NOT

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

High Performance SMD Top LEDs Packaging Specifications

- **Packaging specifications**



NOTES:

Reeled products (numbers of products are 2,000pcs) packed in a seal off moisture-proof bag along with desiccant and Humidity card one by one, Seven moisture-proof bag of maximums (total maximum number of products are 14,000pcs) packed in an inside box (size: about 238mm x about 194mm x about 102mm) and four inside boxes of maximums are put in the outside box (size: about 410mm x about 254mm x about 229mm) 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 onthe cardboard box.) The number of the loading steps of outside box (cardboard box) has it to three steps.