



ETG Inc.

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ETG-3228MN3WHT-19T

DATA SHEET

QC :

ENG :

Prepared By:



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REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDs

Part Number: ETG-3228MN3WHT-19T

Absolute maximum ratings (T_A=25)

Parameter	Symbol	Value	Unit
Forward current	I _f	30	mA
Reverse voltage	V _r	5	V
Power dissipation	P _d	111	mW
Operating temperature range	T _{op}	-20 ~+80	
Storage temperature range	T _{stg}	-20 ~+80	
Peak pulsing current (1/8 duty f=1kHz)	I _{fp}	125	mA

Electro-optical characteristics (T_A=25)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
CIE Coordinates	I _f =20mA	X	0.28	--	0.33	--
		Y	0.27	--	0.39	
Forward voltage	I _f =60mA	V _f	3.2	--	4.0	V
Luminous intensity	I _f =60mA	I _v	2500	4000		mcd
Viewing angle at 50% I _v	I _f =10mA	2 1/2	--	120	--	Deg
Reverse current	V _r =5V	I _r	--	--	10	μA



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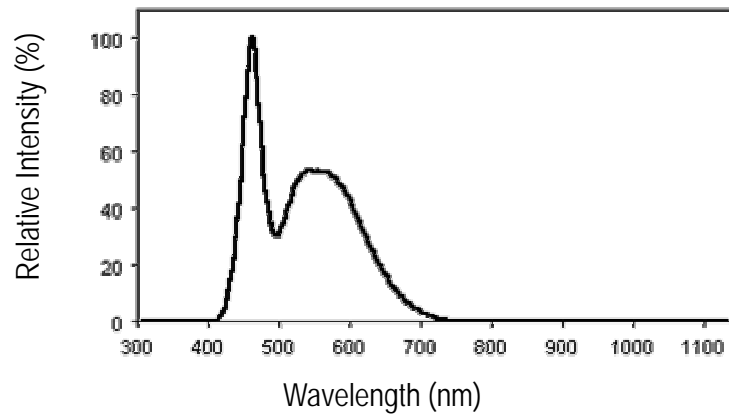
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REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDs

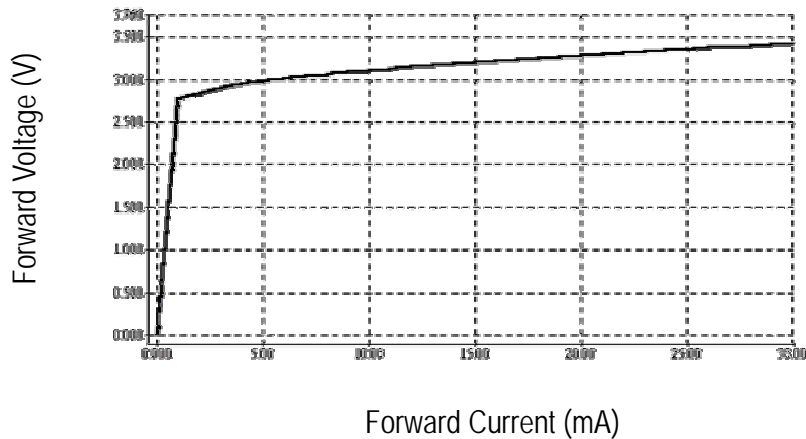
Part Number: ETG-3228MN3WHT-19T

OPTICAL CHARACTERISTIC CURVES

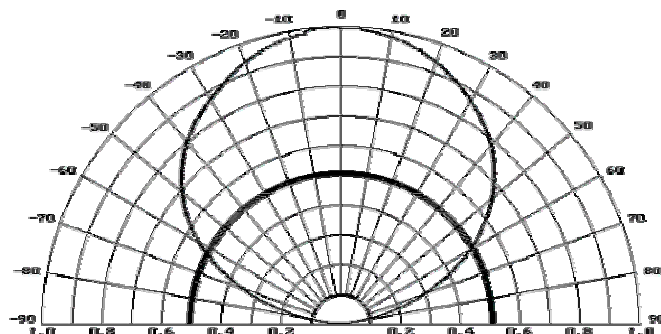
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics





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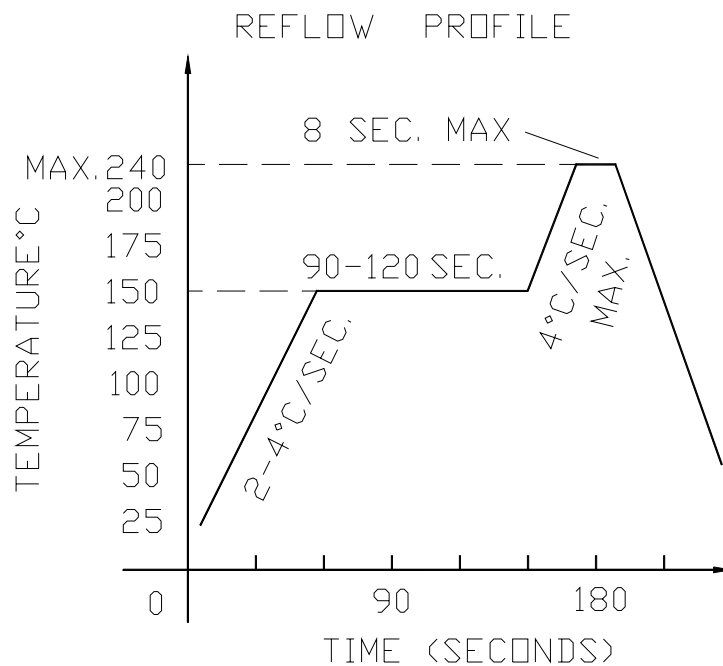
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REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDs

Reflow Profile

■ Reflow Temp/Time



■ Soldering iron

Basic spec is ≤ 5 sec when 260 . If temperature is higher,

time should be shorter (+10 \rightarrow -1sec).Power dissipation

of iron should be smaller than 15W, and temperatures should

be controllable .Surface temperature of the device should be under 230 .



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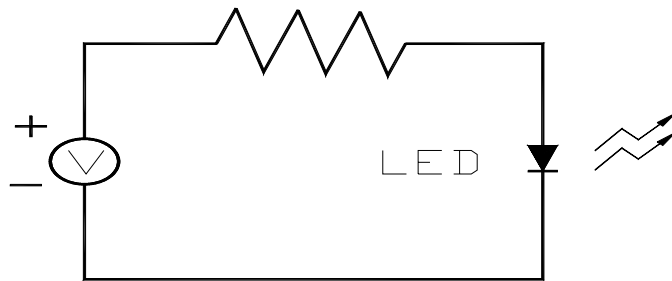
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REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDs

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 ~30 (41 ~86)

2.2 Shelf life in sealed bag: 12 month at < 5 ~30 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 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 x(12~24hrs) and < 5%RH, taped reel type

3.2 100±3 x(45min~1hr), bulk type

3.3 130±3 x(15~30min), bulk type



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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	100 cycle	0/22
		80 30min		
	Thermal Shock	-20 15min	100 cycle	0/22
		80 15min		
	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 =20mA	500 hrs	0/22
	Low Temperature Life Test	T _a =-20 I _F =20mA	1000 hrs	0/22



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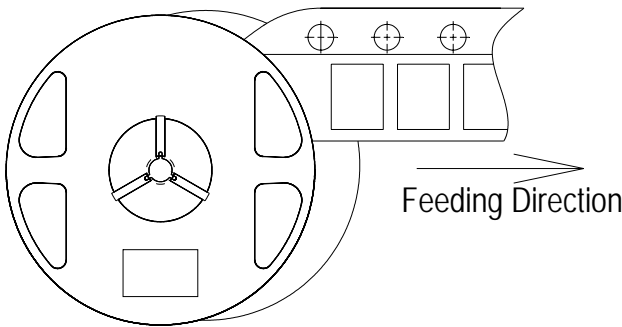
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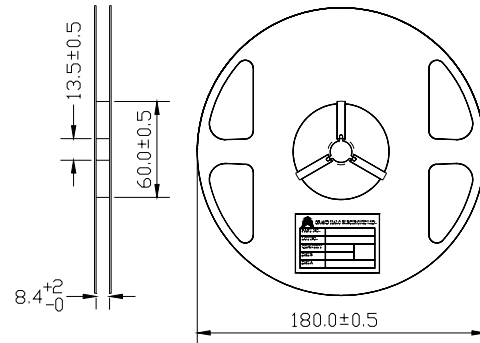
PACKAGING SPECIFICATIONS

Single-Color High Performance SMD Top LEDs Packaging Specifications

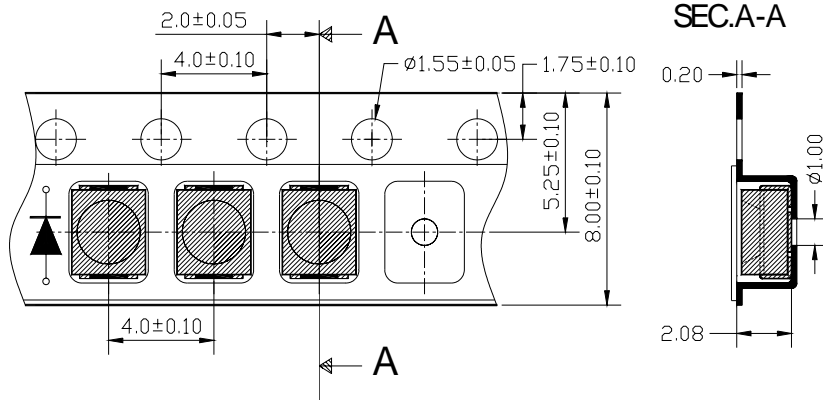
● Feeding Direction



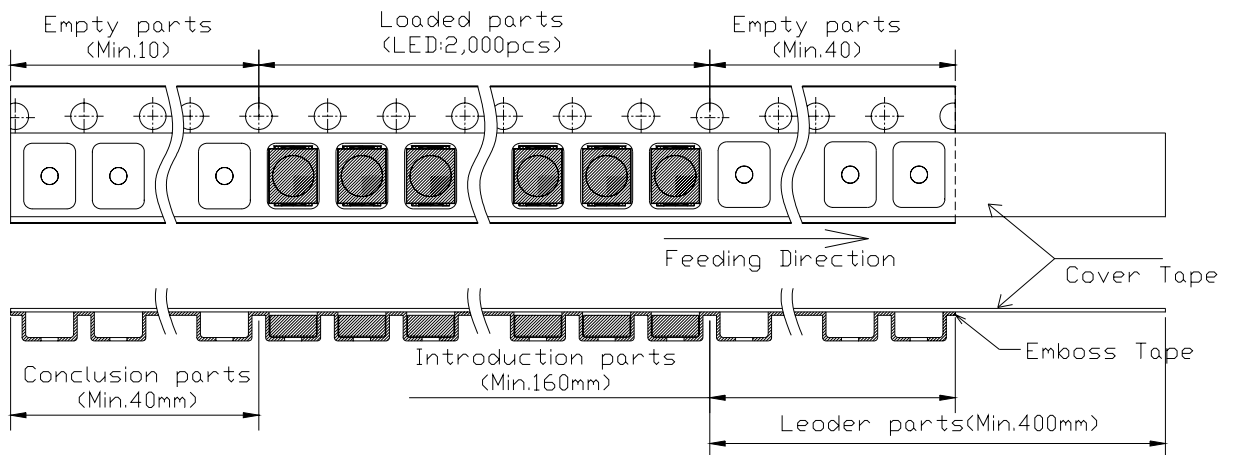
● Dimensions of Reel (Unit: mm)



● 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. 2,000pcs/Reel



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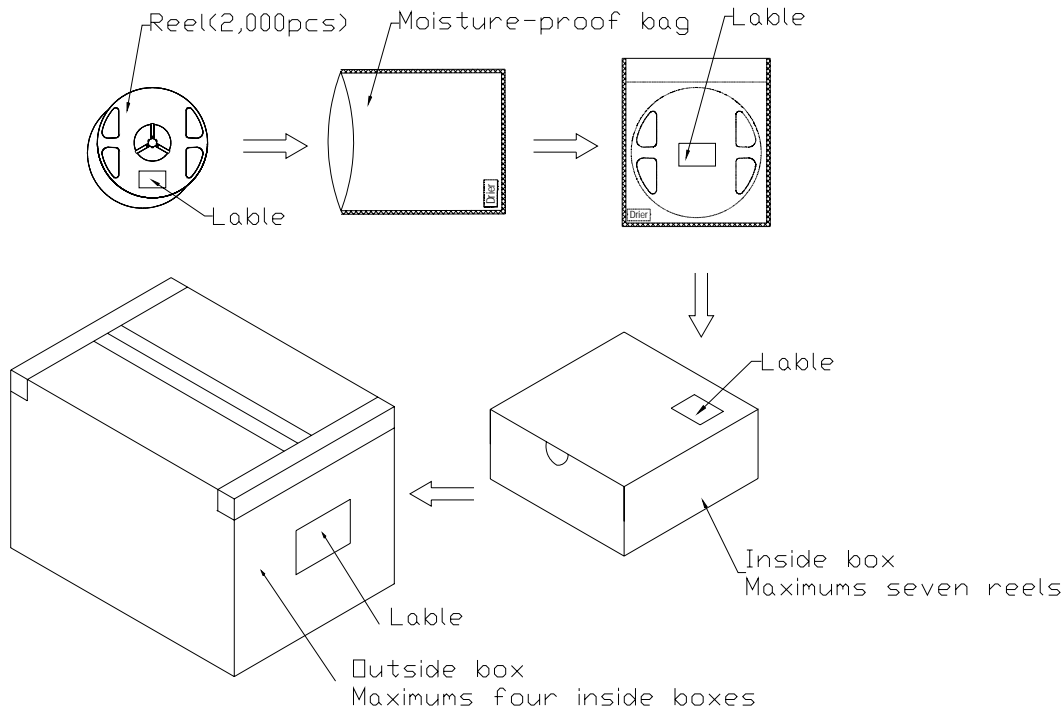
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PACKAGING SPECIFICATIONS

Single-Color 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 a desiccant one by one, Seven moisture-proof bag of maximums (total maximum number of products are 14,000pcs) packed in an inside box (size: about 283mm 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 on the cardboard box.) The number of the loading steps of outside box (cardboard box) has it to three steps.