

DATA SHEET

PART NO.: LT670WDT-WW1-BY

REV: A/1

CUSTOMER'S APPROVAL : _____

DCC : _____

DRAWING NO. : DS-31P-19-0020

DATE : 2019-04-17

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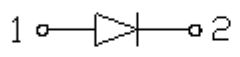
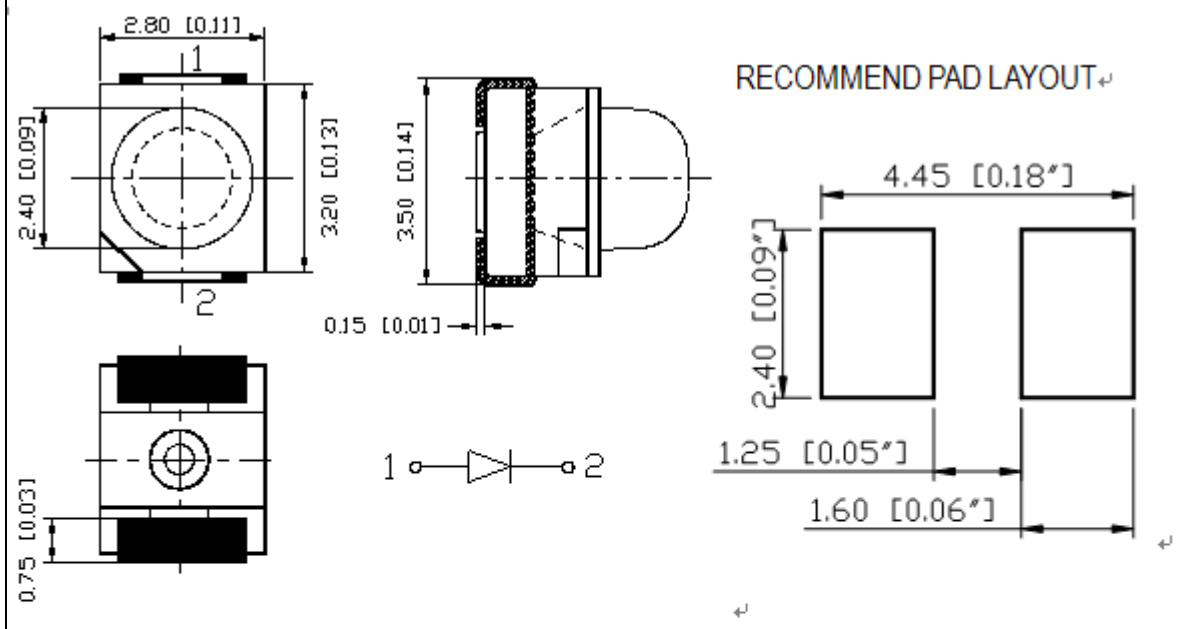
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SURFACE MOUNT DEVICE LED

Part No. : LT670WDT-WW1-BY

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● Package Outline Dimensions



ATTENTION
OBSERVE PRECAUTIONS,
FOR HANDLING,
ELECTROSTATIC,
SENSITIVE DEVICES.

ITEM	MATERIALS
Resin	Epoxy
Lens color	Water transparent
Dice	InGaN
Emitted color	White

NOTES:

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

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● Absolute Maximum Ratings(Ta=25°C)

Symbol	Parameter	Rating	Unit
PD	Power Dissipation	102	mW
IPF	Peak pulsing current (1/8 duty f=1kHz)	125	mA
IF	Continuous Forward Current	30	mA
VR	Reverse Voltage	5	V
Topr	Operating Temperature Range	-40 ~+80	°C
Tstg	Storage Temperature Range	-40 ~ + 85	°C

● Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	5000	9500	15000	mcd	IF=20mA
Viewing Angle	$2 \theta_{1/2}$		30		Deg	
CIE Coordinates	X	-	0.4338	-		IF=20mA
	Y	-	0.4030	-		
Luminous flux * 1	LM	-	8.0	-	lm	IF=20mA
Forward Voltage	VF	2.8	3.0	3.40	V	IF = 20mA
Color temperature	TC	2400	3000	3800	K	IF=20mA
Reverse Current	IR			10	μ A	VR = 5V

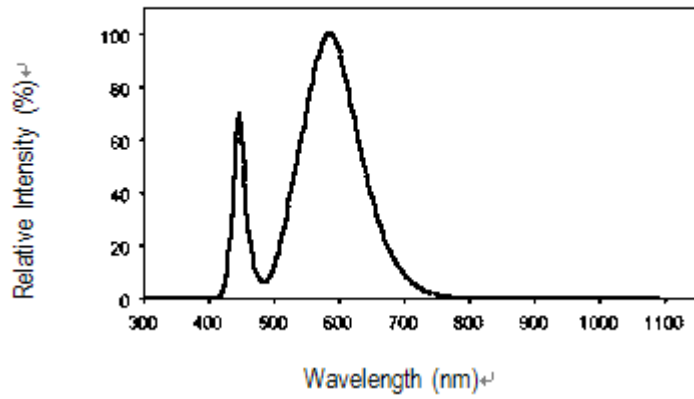
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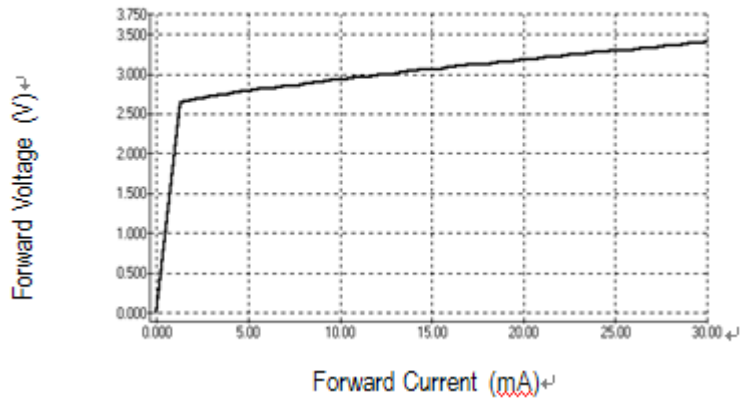
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● Typical Electro-Optical Characteristics Curves

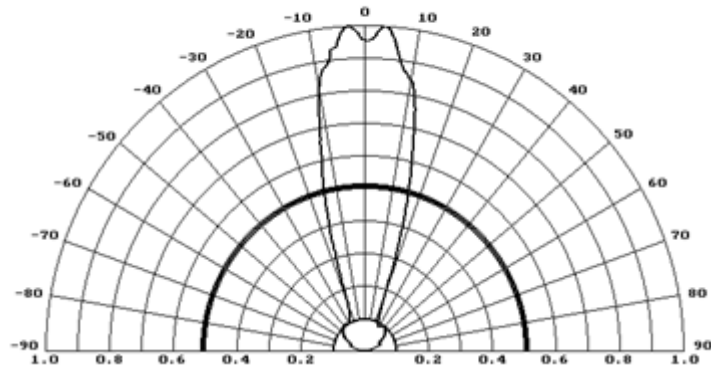
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics



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● Bin Code List

Luminous Intensity(IV), Unit:mcd@20mA			Forward Voltage(VF), Unit:V@20mA		
Bin Code	Min	Max	Bin Code	Min	Max
F	5000	7000	d	2.8	2.9
G	7000	10000	e	2.9	3.0
H	10000	15000	f	3.0	3.1
			g	3.1	3.2
			h	3.2	3.3
			i	3.3	3.4

Bin Code	CIE Coordinates@20 mA				
E	X	0.3841	0.4063	0.4947	0.4496
	Y	0.3543	0.4218	0.4547	0.3779

Group Name on Label (Example DATA: gGE 20)				
DATA: gGE 20	Vf(V)	Iv (mcd)	CIE(X,Y)	Test Condition
g→G→E→20	3.1-3.2	7000-10000	X(0.3841-0.4947),Y(0.3543-0.4547)	IF=20mA

● Label Explanation



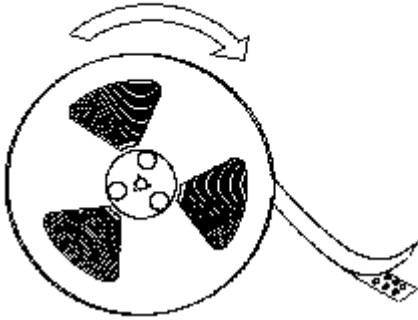
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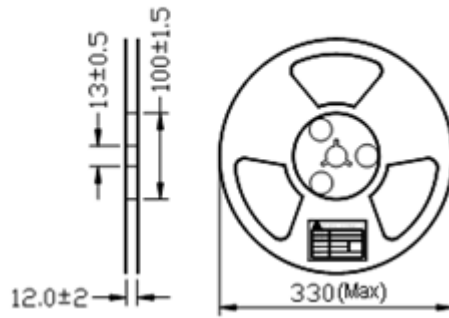
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● Reel Dimensions

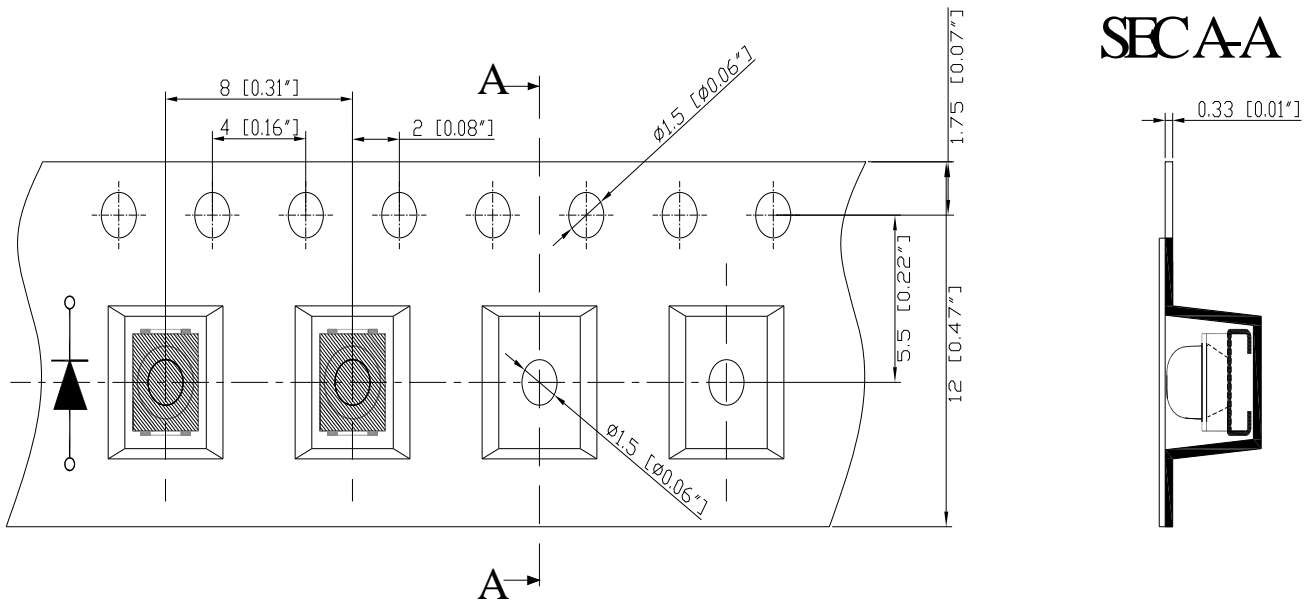
● Feeding Direction



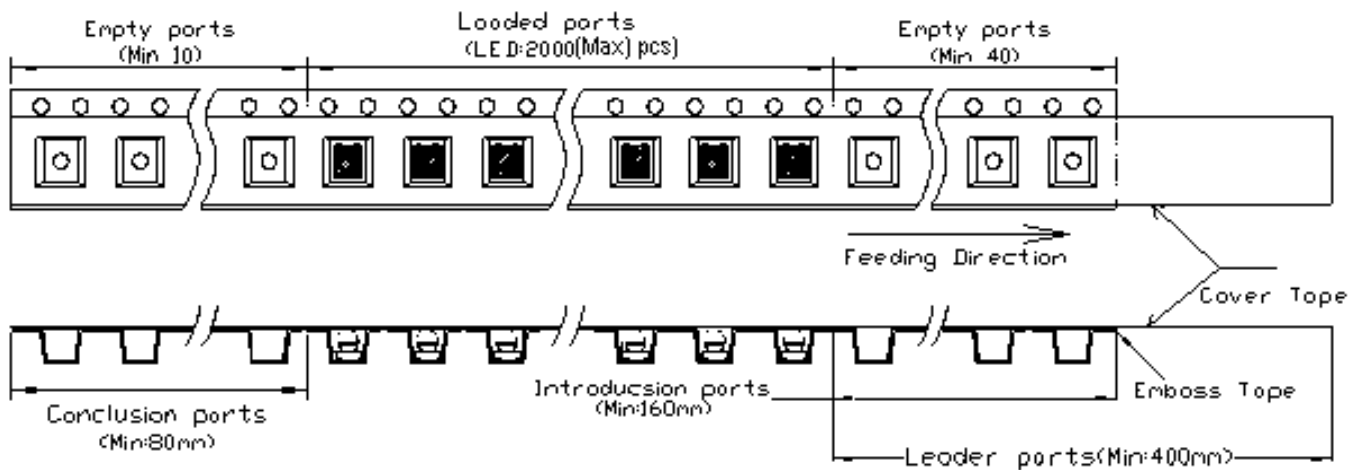
● Dimensions of Reel (Unit: mm)



● Dimensions of Tape (Unit: mm)



● Arrangement of Tape



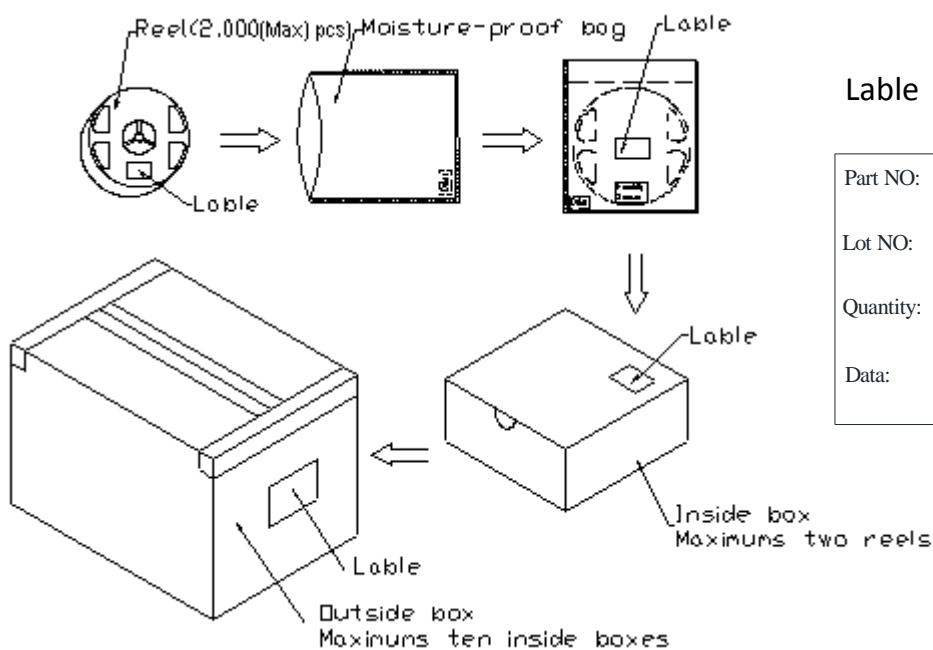
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1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole;
4. 2,000(Max)pcs/Reel

● **Packaging specifications**



Lable

Part NO:
Lot NO:
Quantity:
Data:

NOTES:

Reeled products [numbers of products are 2,000(Max)pcs] packed in a seal off moisture-proof bag along with desiccant and Humidity card one by one, Tow moisture-proof bag of maximums [total maximum number of products are 4,000(Max)pcs] 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 541mm) 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.

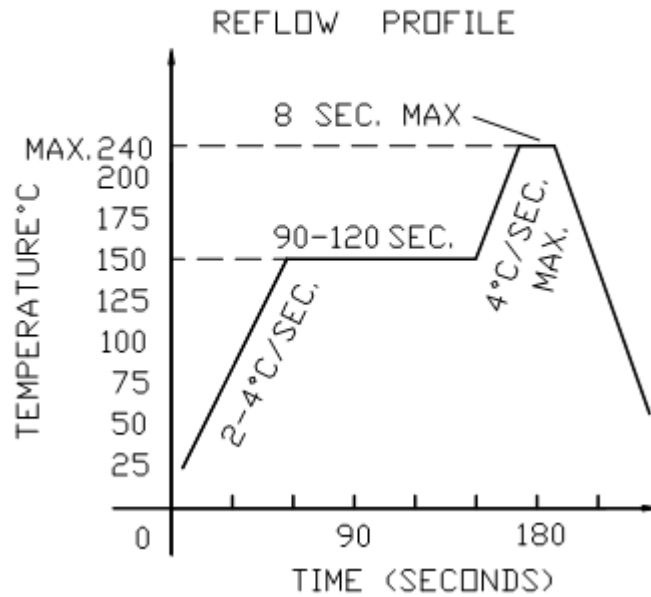
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● Reflow Temp/Time

Reflow Temp/Time



● Soldering iron

Basic spec is ≤ 5 sec when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1$ sec). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

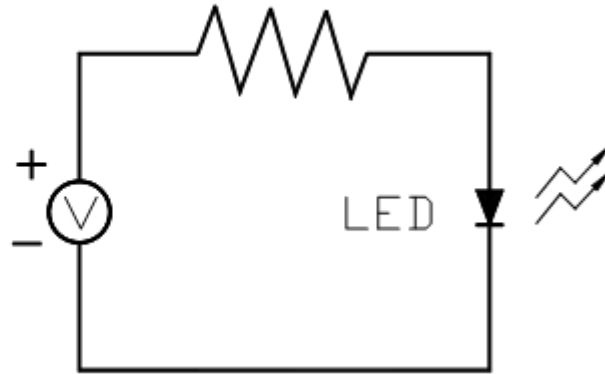
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● Handling precautions

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°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 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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2、 Test Items And Results

Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20°C 30min ↑ ↓ 80°C 30min	100 cycle	0/22
	Thermal Shock	-20°C 15min ↑ ↓ 80°C 15min	100 cycle	0/22
	High Humidity Heat Cycle	30°C ⇔ 65°C 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	T _a =80°C	1000 hrs	0/22
	Humidity Heat Storage	T _a =60°C RH=90%	1000 hrs	0/22
	Low Temperature Storage	T _a =-40°C	1000 hrs	0/22
Operation Sequence	Life Test	T _a =25°C I _f =20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60°C RH=90% I _f =10mA	500 hrs	0/22
	Low Temperature Life Test	T _a =-20°C I _f =20mA	1000 hrs	0/22