BRIGHT LED ELECTRONICS CORP.

LED LAMPS SPECIFICATION

●COMMODITY：AXIAL TYPE LAMP

●DEVICE NUMBER：BL-XY0361 PAGE: 2

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃) VERSION: 1.0

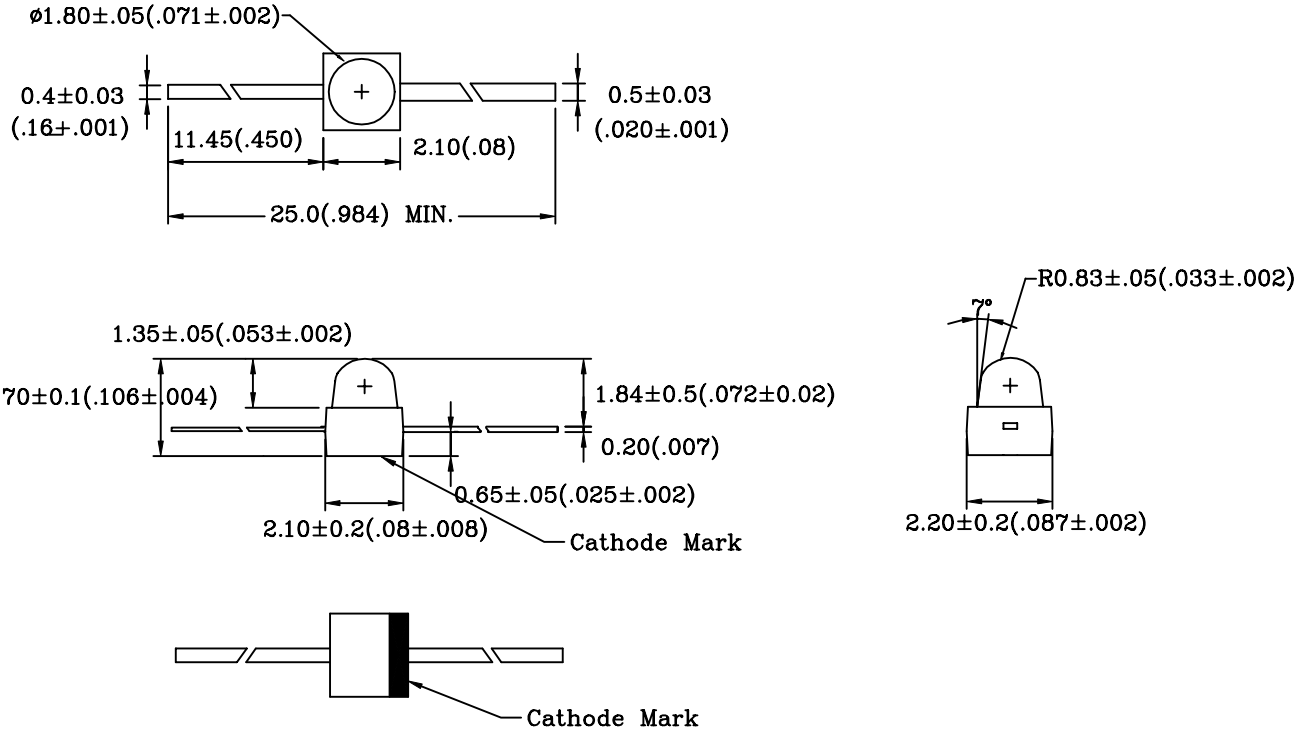
Chip			Lens Appearance	Absolute Maximum Rating				Electro-optical Data (At 20mA)				Viewing Angle 2θ 1/2 (deg)
Emitted Color	Peak Wave Length λ p(nm)	Dominant Wave Length λ d(nm)		Δ λ (nm)	Pd (mW)	If (mA)	Peak If(mA)	Vf(V)		Iv. (mcd)		
								Typ.	Max.	Min	Typ.	
Yellow	583	585±5	Water Clear	35	100	30	150	2.1	2.6	12.3	30.0	35

Remark：Viewing angle is the Off-axis angle at which the luminous intensity is half the axial luminous intensity.

●ABSOLUTE MAXIMUN RATINGS (Ta=25℃)

Reverse Voltage 5V
Reverse Current (V_R=5V) 100μA
Operating Temperature Range ..... -25℃ ～ 80℃
Storage Temperature Range ..... -30℃ ～ 100℃
Lead Soldering Temperature ..... 260℃ For 5 Seconds

●PACKAGE DIMENSIONS



NOTES: 1.All dimensions are in millimeters (inches).

2.Tolerance is ± 0.25mm (0.01") unless otherwise specified.

3.Lead spacing is measured where the leads emerge from the package.

4.Specifications are subject to change without notice.

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Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

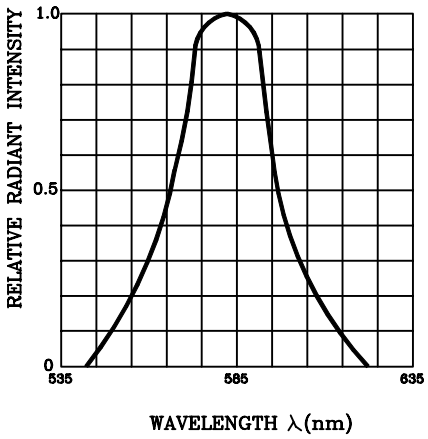


Fig.2 FORWARD CURRENT DERATING CURVE

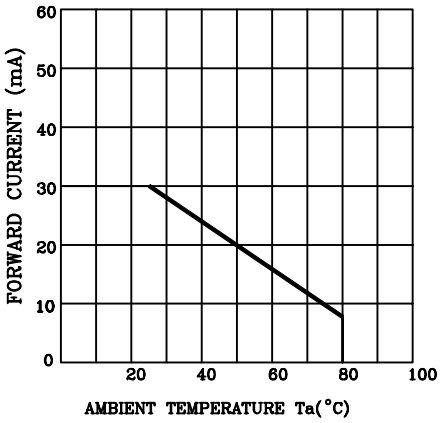


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

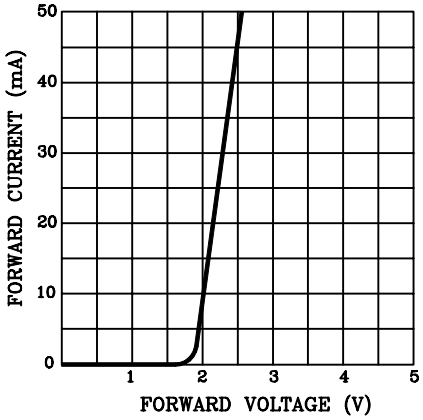


Fig.4 RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

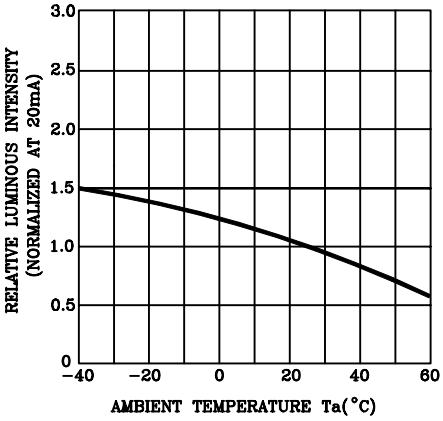


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

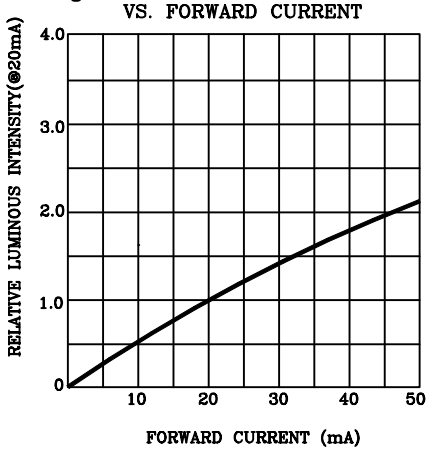
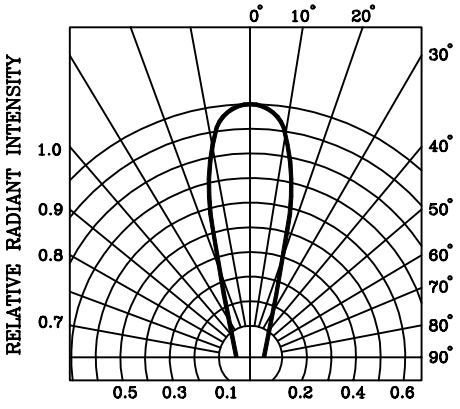


Fig.6 RADIATION DIAGRAM

RADIATION DIAGRAM



BRIGHT LED ELECTRONICS CORP.

SURFACE MOUNT CHIP LED LAMP SPECIFICATION

RELIABILITY TEST

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS C 7021 :B-1	Connect with a power If=20mA Ta=Under room temperature Test time=1,000hrs	0/20
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS C 7021 :B-11	Ta=+65℃±5℃ RH=90%-95% Test time=240hrs	0/20
	High Temperature Storage	MIL-STD-883:1008 JIS C 7021 :B-10	High Ta=+85℃±5℃ Test time=1,000hrs	0/20
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-35℃±5℃ Test time=1,000hrs	0/20
Environmental Test	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS C 7021 :A-4	-35℃ ～+25℃ ～+85℃ ～+25℃ 60min 20min 60min 20min Test Time=5cycle	0/20
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	-35℃±5℃ ～+85℃±5℃ 20min 20min Test Time=10cycle	0/20
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1	Preheating： 140℃-160℃,within 2 minutes. Operation heating： 235℃(Max.), within 10seconds. (Max.)	0/20

JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	V_F (V)	If=20mA	Over Ux1.2
Reverse current	Ir(uA)	Vr=5V	Over Ux2
Luminous intensity	Iv (mcd)	If=20mA	Below SX0.5

Note: 1.U means the upper limit of specified characteristics. S means initial value.

2.Measurment shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.

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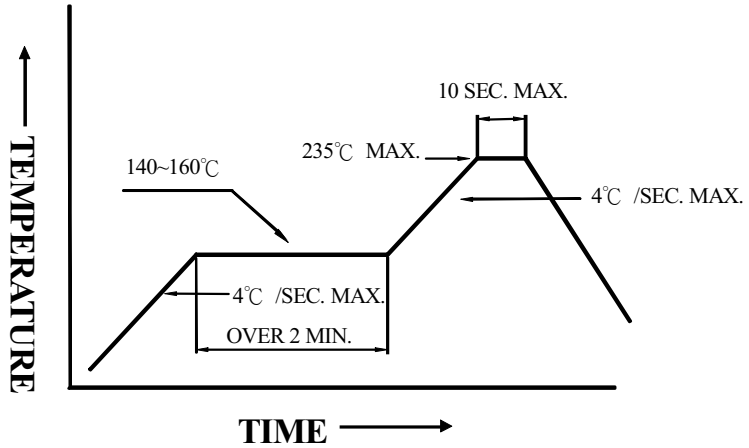
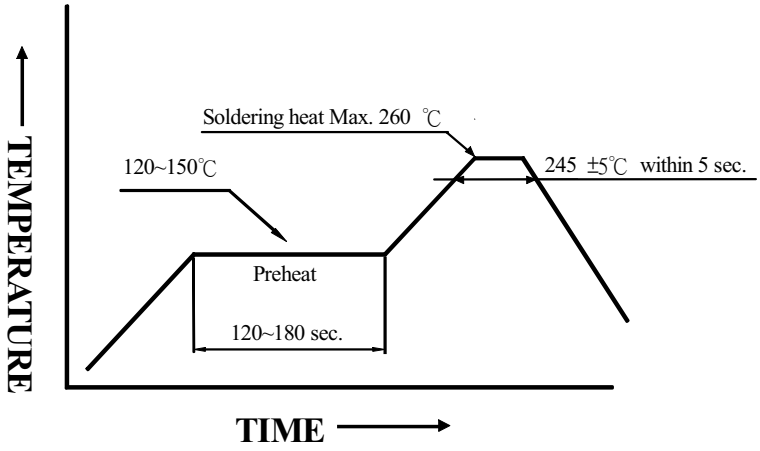
SURFACE MOUNT CHIP LED LAMP SPECIFICATION

1. SOLDERING:

- **Manual Of Soldering**
  The temperature of the iron tip should not be higher than 300℃(572℉) and Soldering within 3 seconds per solder-land is to be observed.
- **Reflow Soldering**
  Preheating : 140℃~160℃±5℃,within 2 minutes.
  Operation heating : 235℃(MAX.) within 10 seconds.(Max)
  Gradual Cooling (Avoid quenching).



- **DIP soldering (Wave Soldering)**
  Preheating : 120℃~150℃,within 120~180 sec.
  Operation heating : 245℃±5℃ within 5 sec.260℃ (Max)
  Gradual Cooling (Avoid quenching).



2. Handling :

Care must be taken not to cause to the epoxy resin portion of BRIGHT LEDs while it is exposed to high temperature.
Care must be taken not rub the epoxy resin portion of BRIGHT LEDs with hard or sharp article such as the sand blast and the metal hook.

3. Notes for designing:

Care must be taken to provide the current limiting resistor in the circuit so as to drive the BRIGHT LEDs within the rated figures. Also, caution should be taken not to overload BRIGHT LEDs with instantaneous voltage at the turning ON and OFF of the circuit.
When using the pulse drive care must be taken to keep the average current within the rated figures. Also, the circuit should be designed so as be subjected to reverse voltage when turning off the BRIGHT LEDs.

4. Storage:

In order to avoid the absorption of moisture, it is recommended to solder BRIGHT LEDs as soon as possible after unpacking the sealed envelope.

If the envelope is still packed, to store it in the environment as following:
(1) Temperature : 5℃-30℃(41℉)Humidity : RH 60% Max.
(2) After this bag is opened, devices that will be applied to infrared reflow, vapor-phase reflow, or equivalent soldering process must be:
a. Completed within 24 hours.
b. Stored at less than 30% RH.
(3) Devices require baking before mounting, if:
(2) a or (2) b is not met.
(4) If baking is required, devices must be baked under below conditions:
12 hours at 60℃± 3℃.

5. Package and Label of Products:

(1) Package: Products are packed in one bag of 3000 pcs (one taping reel) and a label is attached on each bag.
(2) Label: