BRIGHT LED ELECTRONICS CORP.

SURFACE MOUNT CHIP LED LAMP SPECIFICATION

@COMMODITY : SURFACE MOUNT CHIP LED LAMP

@DEVICE NUMBER : BL-HG035A PAGE: 2

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

Chip		Lens Appearance	Absolute Maximun Rating				Electro-optical Data (At 20mA)			Viewing Angle 2θ 1/2 (deg)
Emitted Color	Peak Wave Length λ P(nm)		Δ λ (nm)	Pd (mW)	If (mA)	Peak If(mA)	Vf(V)		Iv Typ. (mcd)	
							Typ.	Max.		
Green	568	Water Clear	30	80	30	150	2.2	2.6	8.0	120

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 (-Vr=5V) 100μA

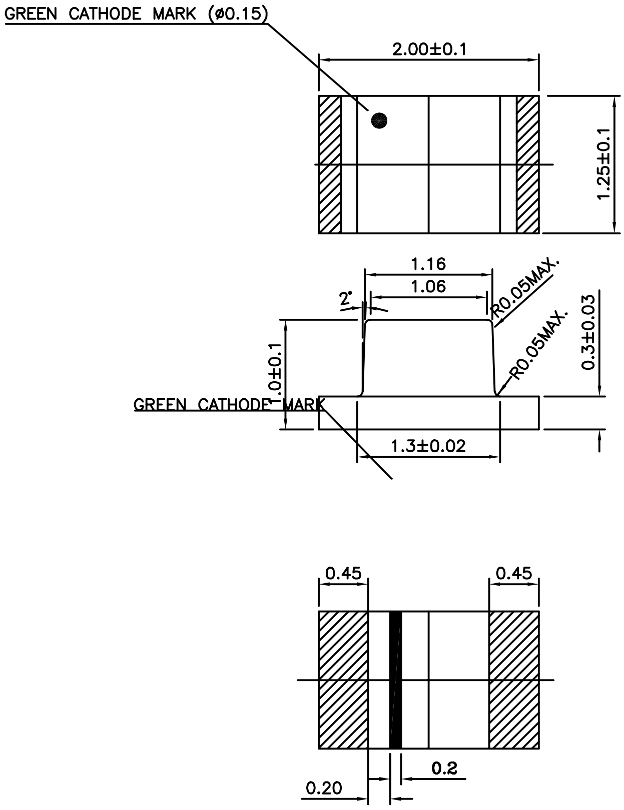
Operating Temperature Range .... -40℃ ～ 80℃

Storage Temperature Range .... -40℃ ～ 85℃

Preheating Temperature .... 100℃ ~ 150℃ Within 2 Minutes

Soldering Temperature .... 240℃ ~ 250℃ Within 5 Seconds

@PACKAGE DIMENSIONS



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

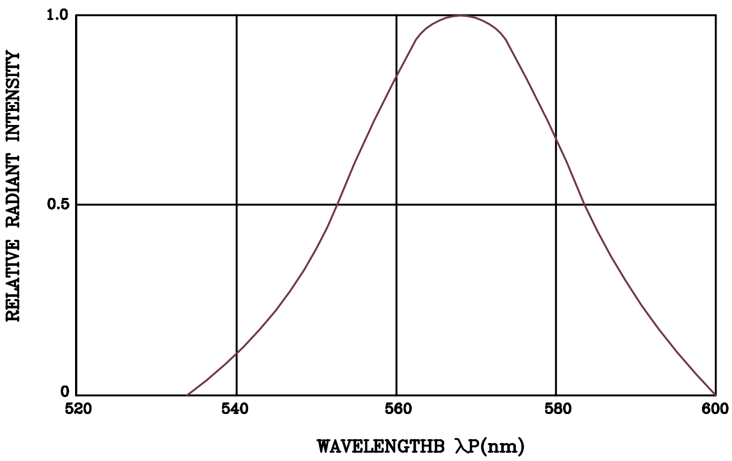
2.Tolerance is ± 0.10mm(0.004") unless otherwise specified.

3.Specifications are subject to change without notice.

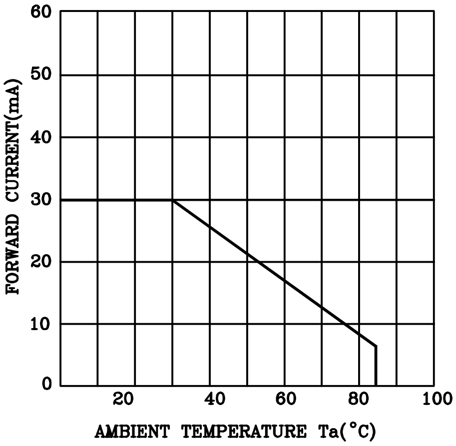
SURFACE MOUNT CHIP LED LAMPS SPECIFICATION

- COMMODITY:SURFACE MOUNT CHIP LED LAMP
- DEVICE NUMBER: BL-HG035A -TR
- ELECTRICAL AND OPTICAL CHARACTERISTICS(Ta=25°C)

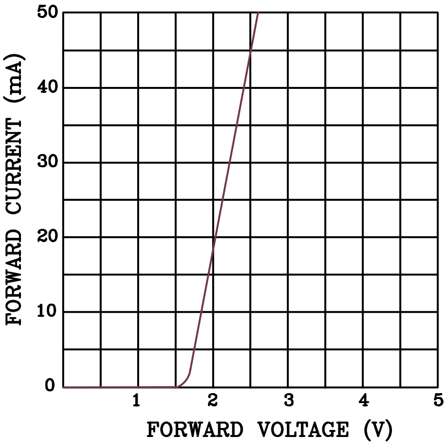
SPECTRAL DISTRIBUTION



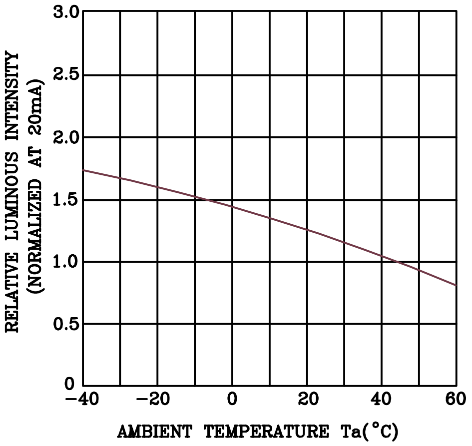
FORWARD CURRENT
DERATING CURVE



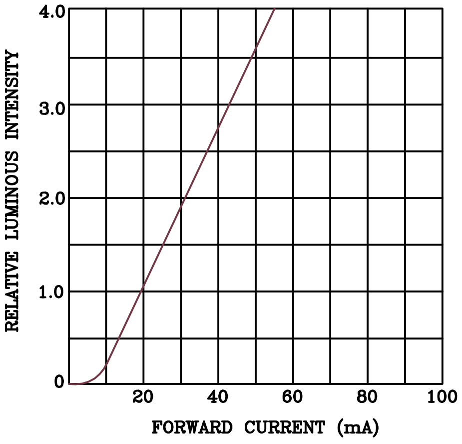
FORWARD CURRENT VS.
FORWARD VOLTAGE



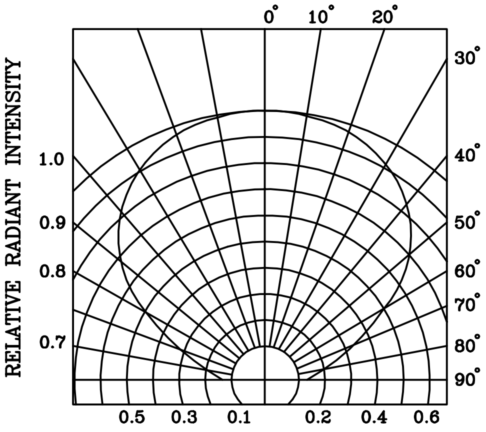
RELATIVE LUMINOUS
INTENSITY VS. AMBIENT
TEMPERATURE



RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



RADIATION DIAGRAM

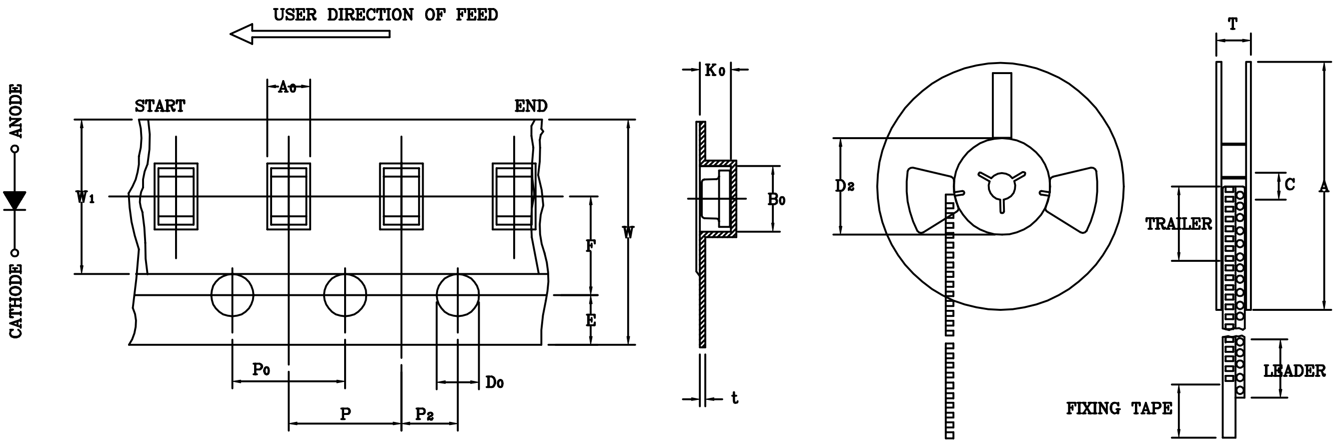


SURFACE MOUNT CHIP LE LAMP SPECIFICATION

- COMMODITY: SURFACE MOUNT CHIP LED LAMP
- DEVICE NUMBER：BL-HG035A-TR
- TAPPING AND PACKAGING SPECIFICATION

VERSION:1.0

ITEM	SYMBOL	SPECIFICATION			
		Minimum		Maximum	
		mm	inch	mm	inch
Tape Feed Hole Diameter (DIA)	D_0	1.40	0.055	1.60	0.063
Feed Hole Location	E	1.65	0.064	1.85	0.073
Centers Line Dimensions Length Direction	F	3.45	0.135	3.55	0.139
Compartment Depth	K_0	1.20	0.047	1.35	0.053
Compartment Pitch	P	3.90	0.153	4.10	0.161
Sprocket Hole Diameter	P_0	3.90	0.153	4.10	0.161
Centers Line Dimensions Length Direction	P_2	1.95	0.076	2.05	0.080
Carrier Tape Thickness	t	—	—	0.30	0.012
Carrier Tape Width	W	7.70	0.303	8.30	0.326
Flange Diameter	A	178.0	7.008	180.0	7.087
Hub Spindle Hole	C	12.50	0.492	13.50	0.531
Hub Diameter	D_2	70.00	2.755	72.00	2.830
Fixing Tape Width	W_1	5.25	0.206	5.35	0.210
Flange Space Between Flanges	T	12.50	0.492	13.50	0.531
Compartment Length	A_0	1.40	0.055	1.50	0.059
Compartment Width	B_0	2.10	0.083	2.20	0.087



NOTE: 3000 pcs PER REEL

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=1,000hrs	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	+85℃±5℃ ～-35℃±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 10 seconds.(Max.)	0/20

JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

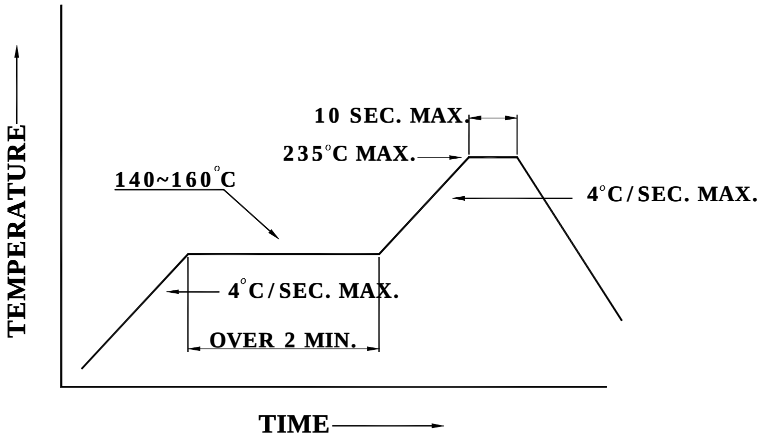
Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	V_F (V)	If=20mA	Over Ux1.2
Reverse current	Ir(uA)	Vr=5V	Over Ux2
Luminous intensity	Iv (mcd)	If=20mA	Below SX0.5

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

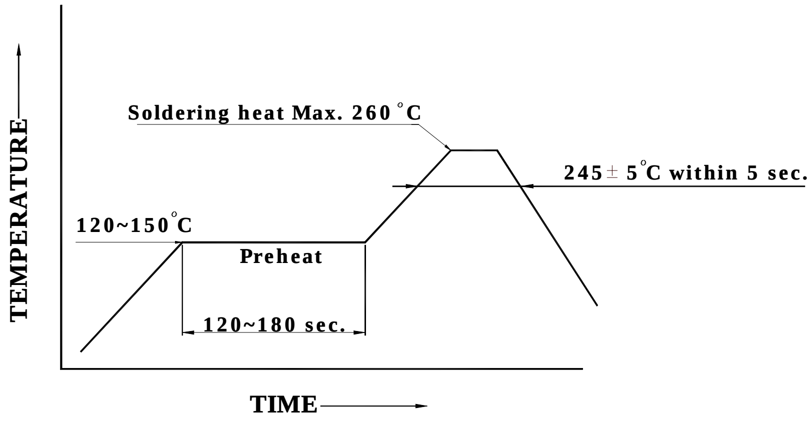
2.Measurment shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.

1. SOLDERING :

- **Manual Of Soldering**
  The temperature of the iron tip should not be higher than 300℃(572°F)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