



# BRIGHT LED ELECTRONICS CORP.

## LED LAMPS SPECIFICATION

●COMMODITY : BACKLIGHT LED LAMPS

●DEVICE NUMBER : BL-LX13G2

PAGE: 2

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25°C)

REVISION: 1.1

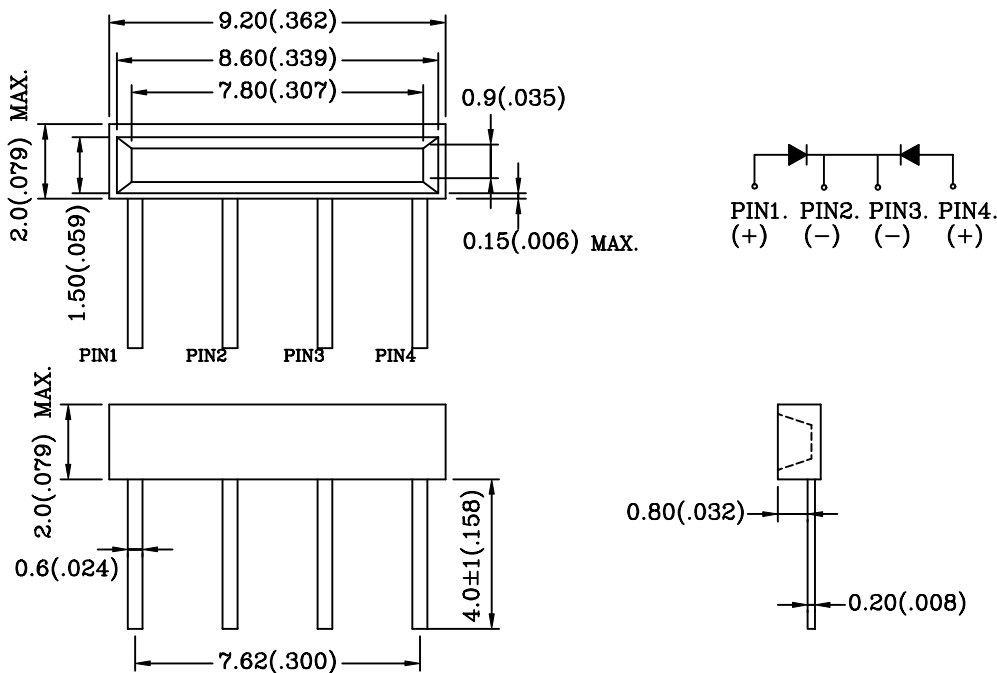
Chip			Lens Appearance	Absolute Maximum Rating				Electro-optical Data (At 20mA)				Viewing Angle 2θ 1/2 (deg)
Emitted Color	Peak Wave Length λ p(nm)	Dominant Wave Length λ d(nm)		Δ λ (nm)	Pd (mW)	If (mA)	Peak If (mA)	Vf(V)		Iv(mcd)		
								Typ.	Max.	Min	Typ.	
Hi-Eff Green	568	570±5	Water Clear	30	100	30	100	2.2	2.6	12.3	25.0	120

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

●ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Reverse Voltage ..... 5V  
 Reverse Current (V<sub>R</sub>=5V) ..... 100μA  
 Operating Temperature Range ..... -25°C ~ 80°C  
 Storage Temperature Range ..... -30°C ~ 85°C  
 Lead Soldering Temperature ..... 260°C 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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## SURFACE MOUNT CHIP LED LAMP SPECIFICATION

●COMMODITY : BACKLIGHT LED LAMP

●DEVICE NUMBER : BL-LX13G2

PAGE: 3

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25°C)

REVISION: 1.0

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

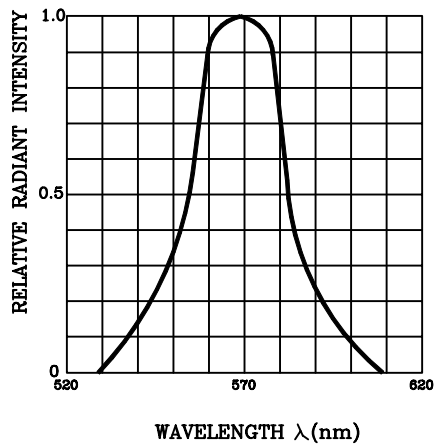


Fig.2 FORWARD CURRENT DERATING CURVE

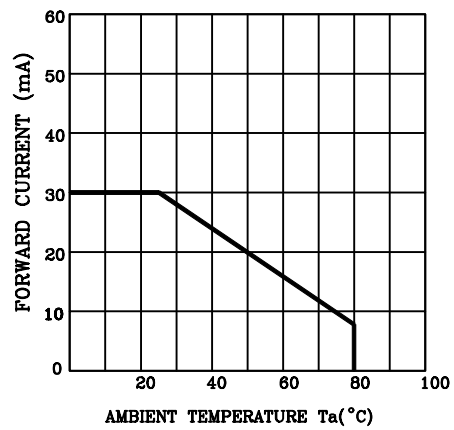


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

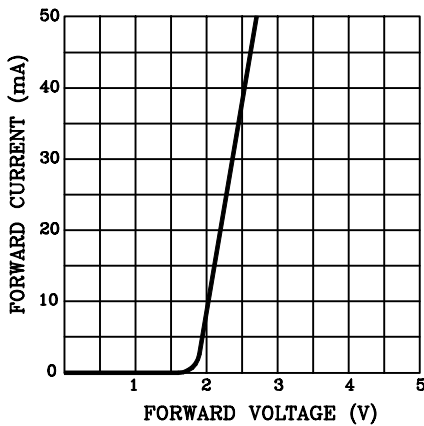


Fig.4 RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

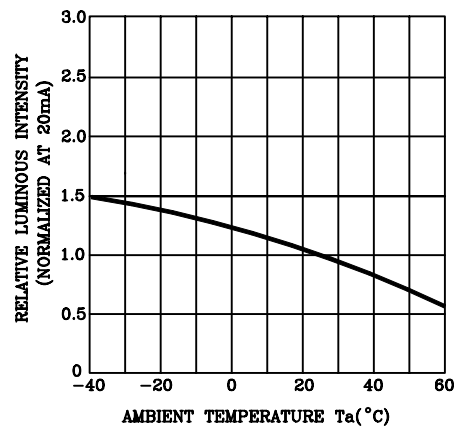


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

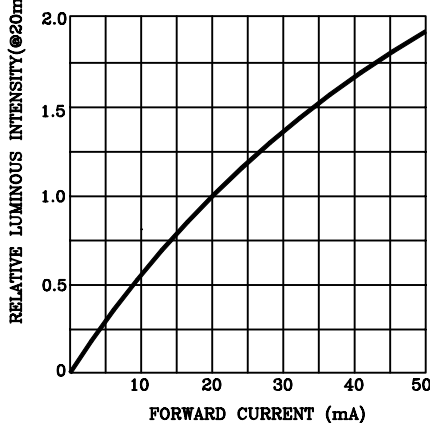
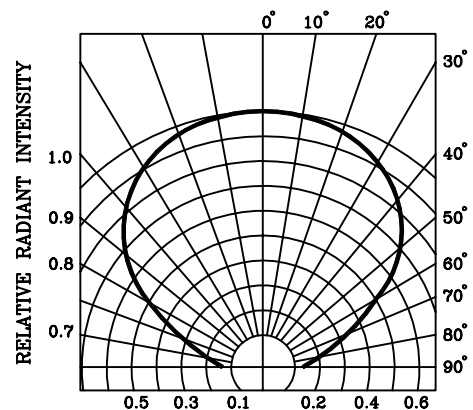


Fig.6 RADIATION DIAGRAM



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## SURFACE MOUNT CHIP LED LAMP SPECIFICATION

### RELIABILITY TEST

PAGE: 4

REVISION: 1.0

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 $I_f=20\text{mA}$ $T_a$ =Under room temperature Test time=1,000hrs	0/20
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS C 7021 :B-11	$T_a=+65^\circ\text{C}\pm 5^\circ\text{C}$ RH=90%-95% Test time=240hrs	0/20
	High Temperature Storage	MIL-STD-883:1008 JIS C 7021 :B-10	High $T_a=+85^\circ\text{C}\pm 5^\circ\text{C}$ Test time=1,000hrs	0/20
	Low Temperature Storage	JIS-C-7021 :B-12	Low $T_a=-35^\circ\text{C}\pm 5^\circ\text{C}$ 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	$-35^\circ\text{C} \sim +25^\circ\text{C} \sim +85^\circ\text{C} \sim +25^\circ\text{C}$ 60min 20min 60min 20min Test Time=5cycle	0/20
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	$-35^\circ\text{C}\pm 5^\circ\text{C} \sim +85^\circ\text{C}\pm 5^\circ\text{C}$ 20min 20min Test Time=10cycle	0/20
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1	Preheating : $140^\circ\text{C} - 160^\circ\text{C}$ , within 2 minutes. Operation heating : $235^\circ\text{C}$ (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 )	$I_f=20\text{mA}$	Over $U_x1.2$
Reverse current	$I_r$ ( $\mu\text{A}$ )	$V_r=5\text{V}$	Over $U_x2$
Luminous intensity	$I_v$ ( mcd )	$I_f=20\text{mA}$	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.