

BRIGHT LED ELECTRONICS CORP.

LED LAMPS SPECIFICATION

●COMMODITY : T-1 Standard 1.0"Lead , 3 ϕ

●DEVICE NUMBER : BL-B2131-L

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

VERSION : 1.0

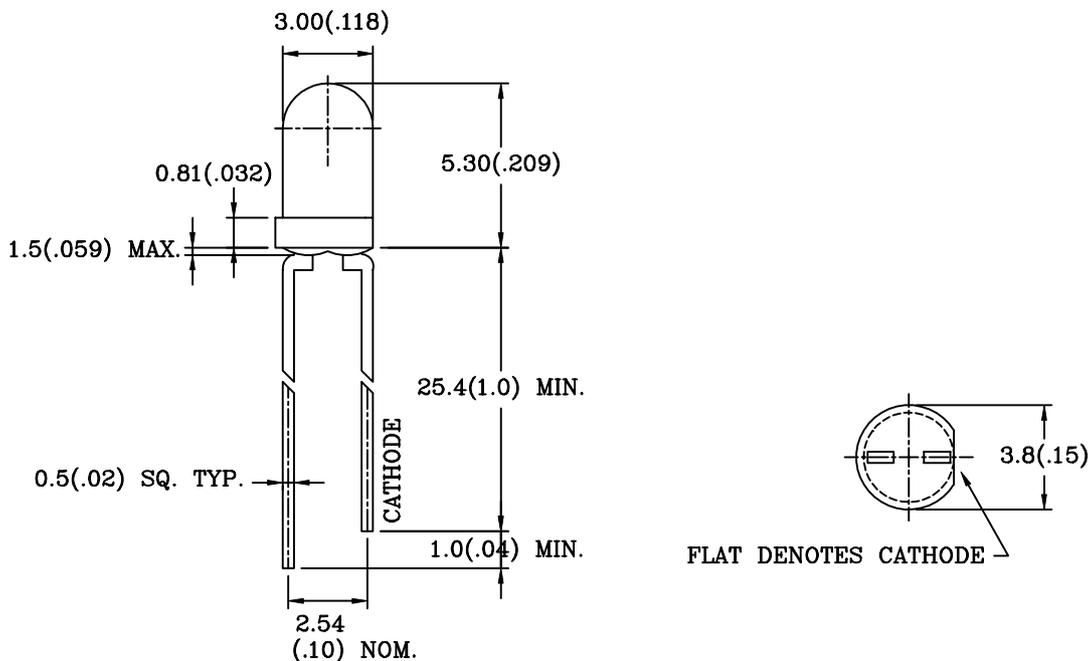
| Chip | | Lens Appearance | Absolute Maximum Rating | | | Electro-optical Data (At 2 mA) | | | Viewing Angle 2 θ 1/2 (deg) |
|---------------|-------------------------------------|--------------------|--------------------------|------------|------------|--------------------------------|------|------------------|--|
| Emitted Color | Peak Wave Length λ P(nm) | | $\Delta \lambda$ (nm) | Pd (mW) | If (mA) | Vf(V) | | Iv Typ. (mcd) | |
| | | | | | | Typ. | Max. | | |
| Green | 568 | Green Diffused | 30 | 10 | 5 | 1.9 | 2.2 | 6.0 | 40 |

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 (-Vr=5V) | 100 μ A |
| Operating Temperature Range | -40°C ~ 80°C |
| Storage Temperature Range | -40°C ~ 85°C |
| Lead Soldering Temperature | 260°C For 5 Seconds |

●PACKAGE DIMENSIONS



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

2.Tolerance is ± 0.25 mm (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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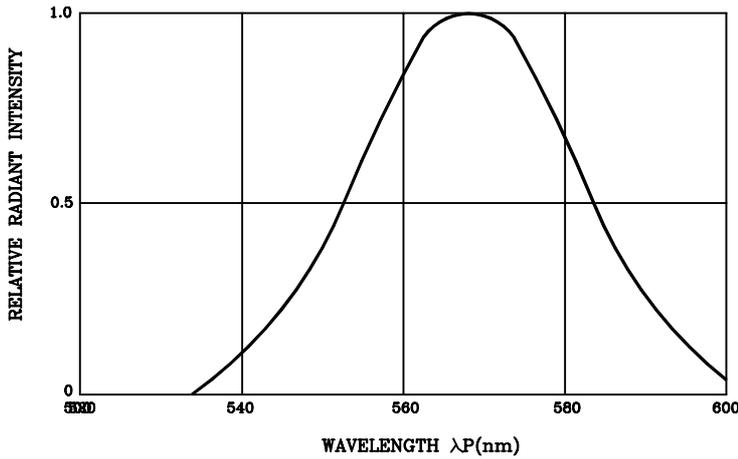
● DEVICE NUMBER: BL-B2131-L

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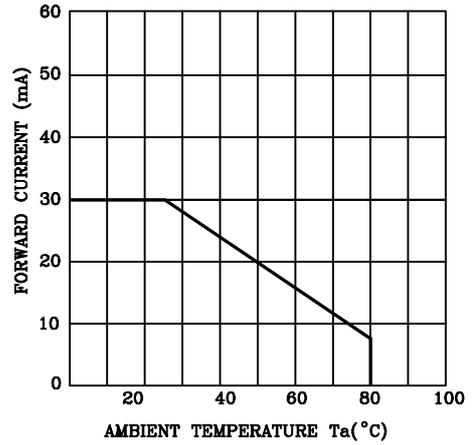
● ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25°C)

REVISION: 1.0

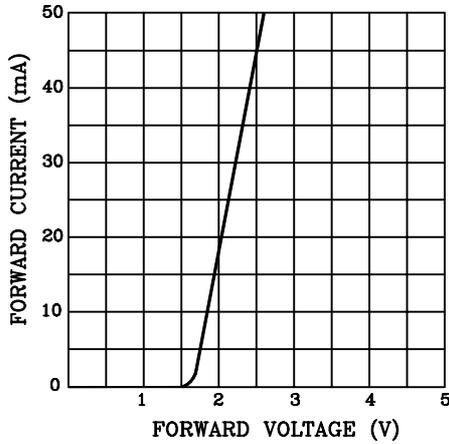
SPECTRAL DISTRIBUTION



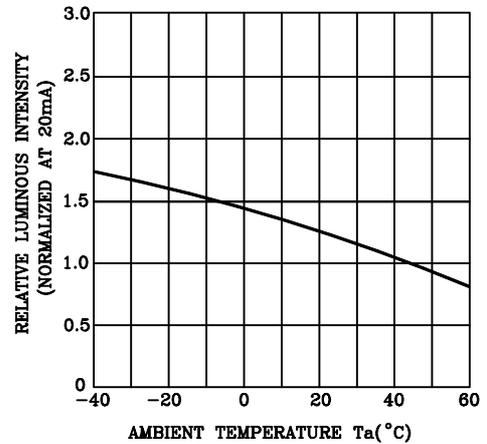
FORWARD CURRENT DERATING CURVE



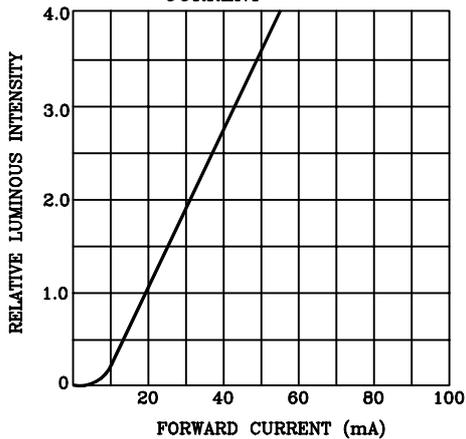
FORWARD CURRENT VS. FORWARD VOLTAGE



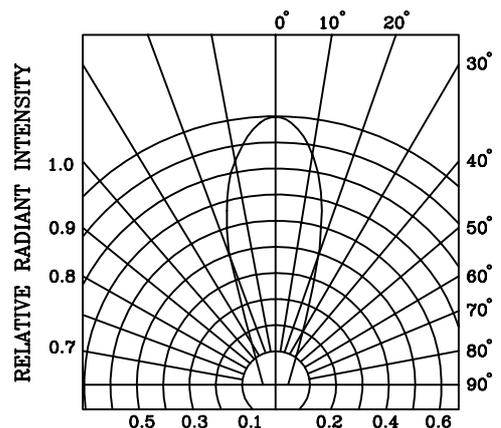
RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



RADIATION DIAGRAM



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RELIABILITY TEST

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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 $I_f=7\text{mA}$ T_a =Under room temperature Test time=1,000hrs | 0/100 |
| | High Temperature High Humidity Storage | MIL-STD-202:103B JIS C 7021 :B-11 | $T_a=85^\circ\text{C}\pm 5^\circ\text{C}$ RH=90%-95% Test time=1,000hrs | 0/100 |
| | High Temperature Storage | MIL-STD-883:1008 JIS C 7021 :B-10 | High $T_a=105^\circ\text{C}\pm 5^\circ\text{C}$ Test time=1,000hrs | 0/100 |
| | Low Temperature Storage | JIS-C-7021 :B-12 | Low $T_a=-55^\circ\text{C}\pm 5^\circ\text{C}$ Test time=1,000hrs | 0/100 |
| Environmental Test | Temperature Cycling | MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS C 7021 :A-4 | $-55^\circ\text{C} \sim 25^\circ\text{C} \sim 105^\circ\text{C} \sim 25^\circ\text{C}$ 30min 5min 30min 5min Test Time=10cycle | 0/100 |
| | Thermal Shock | MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011 | $105^\circ\text{C}\pm 5^\circ\text{C} \sim -55^\circ\text{C}\pm 5^\circ\text{C}$ 10min 10min Test Time=10cycle | 0/100 |
| | Solder Resistance | MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1 | $T_{\text{sol}}=260\pm 5^\circ\text{C}$ Dwell Time= $10\pm 1\text{sec}$. | 0/50 |
| | Solderability | MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021 :A-2 | $T_{\text{sol}}=230\pm 5^\circ\text{C}$ Dwell Time= $5\pm 1\text{sec}$. | 0/50 |
| | Lead Bending Stress | MIL-STD-750:2036 JIS C 7021 :A-11 | $0^\circ\sim 90^\circ\sim 0^\circ$ bend , 3 cycles Weight 250g | 0/50 |

JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

| Measuring items | Symbol | Measuring conditions | Judgement criteria for failure |
|--------------------|--------|----------------------|--------------------------------|
| Forward voltage | VF | $I_F=2\text{mA}$ | Over $U_x1.2$ |
| Reverse current | IR | $V_R=5\text{V}$ | Over U_x2 |
| Liminous intensity | IV | $I_F=2\text{mA}$ | Below $S_x0.5$ |

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.