



BRIGHT LED ELECTRONICS CORP.

LED DISPLAY SPECIFICATION

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 REVISION: 1.0

- COMMODITY : Round 20 ϕ
- DEVICE NUMBER : BL-B6D120-2P

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2003.02.20	1.0	1.0	1.0	1.0								Original Release

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APPROVED	DRAWER

BRIGHT LED ELECTRONICS CORP.

LED LAMPS SPECIFICATION

●COMMODITY : Round 20 ϕ

PAGE: 2

●DEVICE NUMBER : BL-B6D120-2P

VERSION : 1.0

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

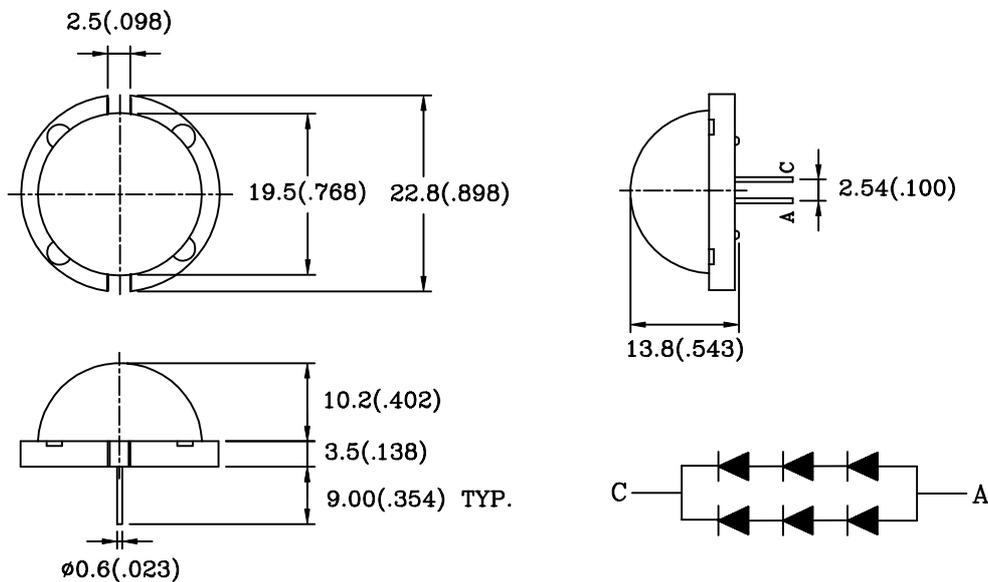
Chip		Lens Appearance	Absolute Maximum Rating				Electro-optical Data (At 20mA)			Viewing Angle 2 θ 1/2 (deg)
Emitted Color	Peak Wave Length λP (nm)		$\Delta \lambda$ (nm)	Pd (mW)	If (mA)	Peak If(mA)	Vf(V)		Iv Typ. (mcd)	
							Typ.	Max.		
Super Red	660	Red Diffused	20	240	30	150	5.1	7.8	200.0	180

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_R=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.

BRIGHT LED ELECTRONICS CORP.

LED LAMPS SPECIFICATION

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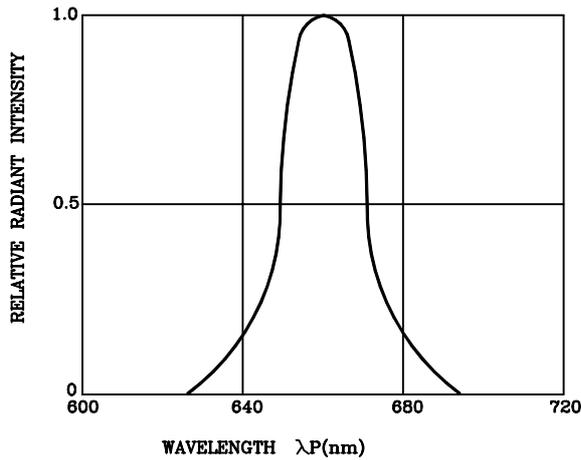
● DEVICE NUMBER: BL-B6D120-2P

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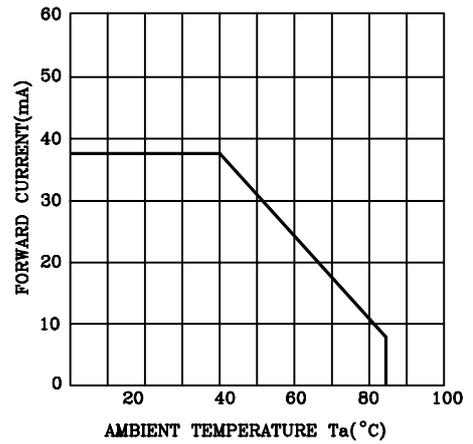
● ELECTRICAL AND OPTICAL CHARACTERISTICS(T_a=25 $^{\circ}$ C)

REVISION: 1.0

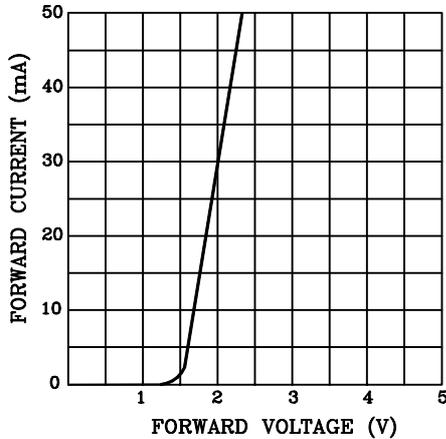
SPECTRAL DISTRIBUTION



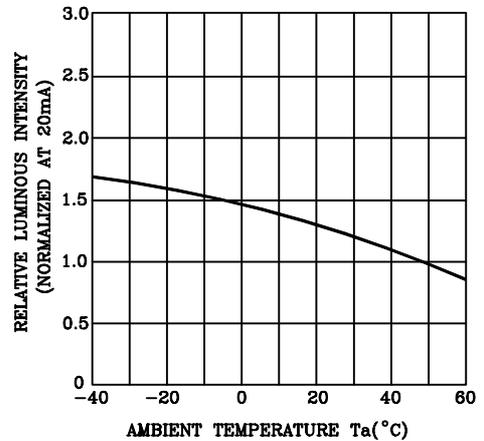
FORWARD CURRENT DERATING CURVE



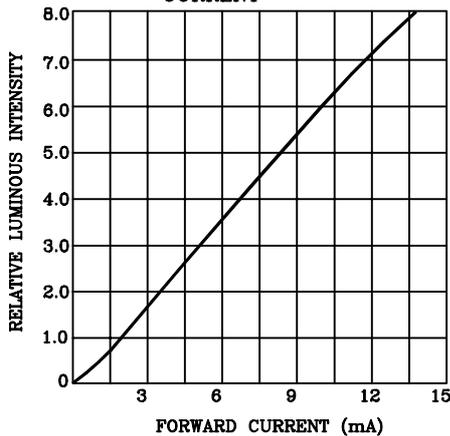
FORWARD CURRENT VS. FORWARD VOLTAGE



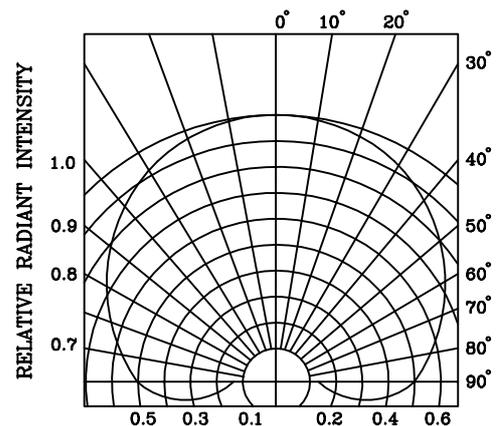
RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



RADIATION DIAGRAM



RELIABILITY TEST

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DEVICE NO.: BL-B6D120-2P

VERSION: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 If=30mA Ta=Under room temperature Test time=1,000hrs	0/100
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS C 7021 :B-11	Ta=85°C±5°C RH=90%-95% Test time=1,000hrs	0/100
	High Temperature Storage	MIL-STD-883:1008 JIS C 7021 :B-10	High Ta=105°C±5°C Test time=1,000hrs	0/100
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-55°C±5°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	-35°C ~ 25°C ~ 105°C ~ 25°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°C±5°C ~ -55°C±5°C 10min 10min Test Time=10cycle	0/100
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1	T.sol=260±5°C Dwell Time=10±1sec.	0/50
	Solderability	MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021 :A-2	T.sol=230±5°C Dwell Time=5±1sec.	0/50
	Lead Bending Stress	MIL-STD-750:2036 JIS C 7021 :A-11	0°~90°~0°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	IF=20mA	Over Ux1.2
Reverse current	IR	VR=5V	Over Ux2
Luminous intensity	IV	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.