



●DEVICE NUMBER : BL-BB54N1

佰鴻工業股份有限公司
BRIGHT LED ELECTRONICS CORP.
台北縣板橋市和平路 19 號 3 樓
3F., No. 19, Ho Ping Road, Pan Chiao City,
Taipei, Taiwan, R. O. C.
Tel: 886-2-29591090
Fax: 886-2-29547006/29558809
www.brtled.com

APPROVED	DRAWER
	

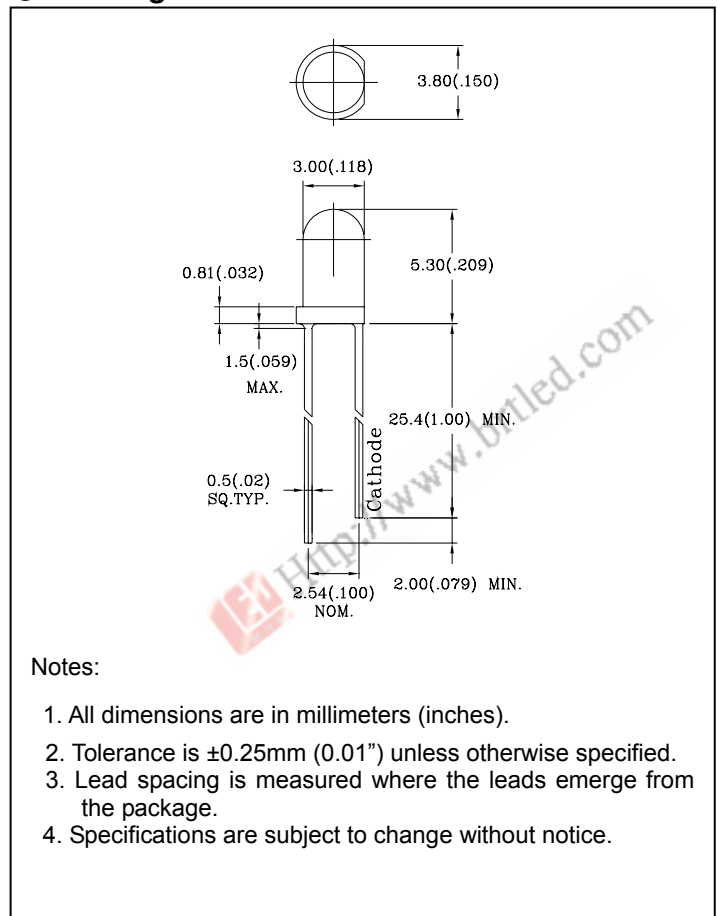
● Features:

1. Chip material: InGaN
2. Emitted color : Super Blue
3. Lens Appearance : Blue Trans
4. Low power consumption.
5. High efficiency.
6. Versatile mounting on P.C. Board or panel.
7. Low current requirement.
8. 3mm diameter package.
9. This product don't contained restriction substance, compliance ROHS standard.

● Applications:

1. TV set
2. Monitor
3. Telephone
4. Computer
5. Circuit board

● Package dimensions:



● Absolute maximum ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	120	mW
Forward Current	I _F	30	mA
Peak Forward Current* ¹	I _{FP}	150	mA
Reverse Voltage	V _R	5	V
Operating Temperature	Topr	-40°C~85°C	
Storage Temperature	Tstg	-40°C~100°C	
Soldering Temperature	Tsol	260°C max (for 5 seconds)	
Hand Soldering Temperature	Tsol	350°C max(for 3 seconds)	

*¹Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

Electrical and optical characteristics(Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$	-	3.5	4.0	V
Luminous Intensity	I_v	$I_F=20\text{mA}$	-	2000	-	mcd
Reverse Current	I_R	$V_R=5\text{V}$	-	-	100	μA
Peak Wave Length	λ_p	$I_F=20\text{mA}$	-	470	-	nm
Dominant Wave Length	λ_d	$I_F=20\text{mA}$	460	-	475	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=20\text{mA}$	-	30	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20\text{mA}$	-	30	-	deg

Typical electro-optical characteristics curves

Fig.1 Relative intensity vs. Wavelength

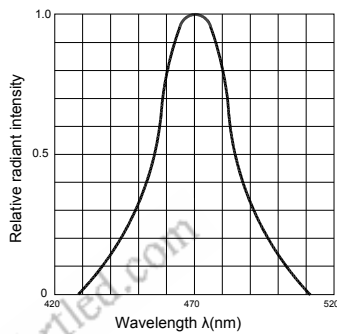


Fig.2 Forward current derating curve vs. Ambient temperature

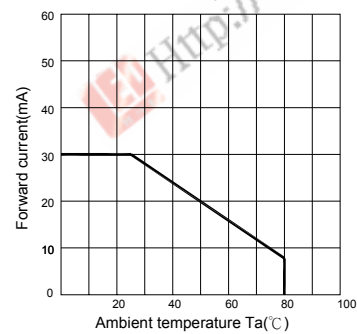


Fig.3 Forward current vs. Forward voltage

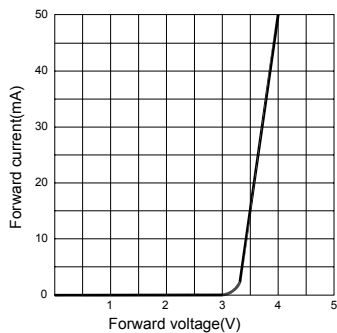


Fig.4 Relative luminous intensity vs. Ambient temperature

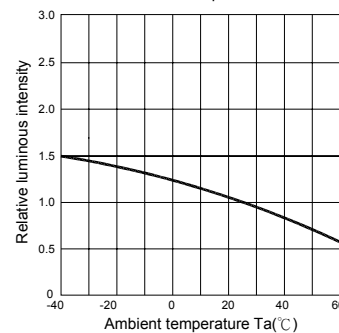


Fig.5 Relative luminous intensity vs. Forward current

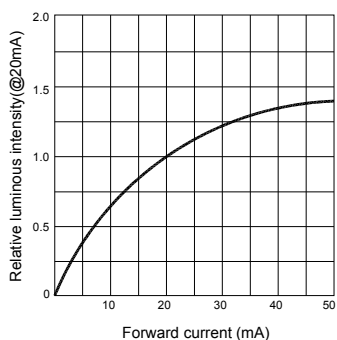
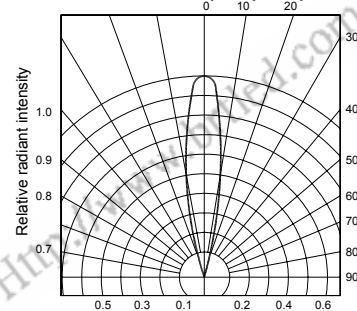


Fig.6 Radiation diagram



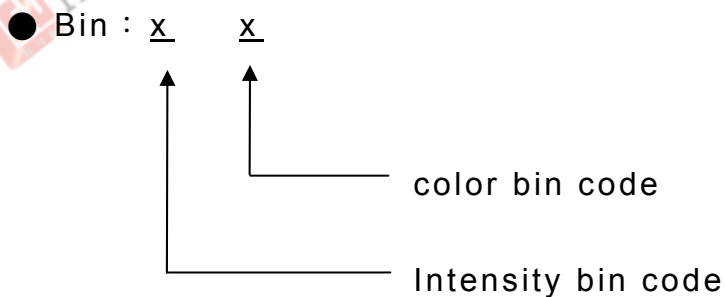
● Bin Limits

1. Intensity Bin Limits (At $I_F = 20\text{mA}$)

Bin Code	Min. (mcd)	Max. (mcd)
V	715	1070
W	1070	1600
X	1600	2400
Y	2400	3700
Z	3700	5550

2. Color Bin Limits (At $I_F = 20\text{mA}$) : Dominant Wave Length $\lambda_d(\text{nm})$

Bin Code	Min. (nm)	Max. (nm)
3	460	465
4	465	470
5	470	475



NOTES: 1. Tolerance of measurement of luminous intensity. : $\pm 15\%$

2. Tolerance of measurement of dominant wavelength : $\pm 1.0\text{nm}$

● DIP soldering (Wave Soldering)

Preheating : 120°C, within 120~180 sec.

Operation heating : 255°C ±5°C within 5 sec. 260°C (Max)

Gradual Cooling (Avoid quenching).

