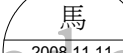
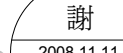




● **DEVICE NUMBER : BL-R4539A-AV**

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
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Tel: 886-2-29591090
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APPROVED	DRAWER
	

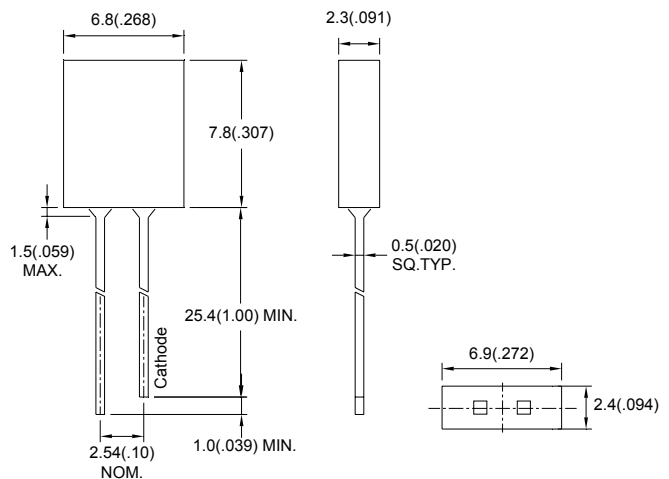
● Features:

1. Chip material: GaAsP/GaP
2. Emitted color : Hi-Eff Red
3. Lens Appearance : Red Diffused
4. Low power consumption.
5. Most suitable for use like level indicator.
6. Excellent uniformity of light emittance.
7. Long life solid state reliability.
8. Compatible.
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:



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (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.

● Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Power Dissipation	P_d	80	mW
Forward Current	I_F	30	mA
Peak Forward Current ^{*1}	I_{FP}	150	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	$-40^\circ\text{C} \sim 85^\circ\text{C}$	
Storage Temperature	T_{stg}	$-40^\circ\text{C} \sim 100^\circ\text{C}$	
Soldering Temperature	T_{sol}	260°C max(for 5 seconds)	
Hand Soldering Temperature	T_{sol}	350°C max(for 3 seconds)	

^{*1}Condition 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 =20mA	-	2.0	2.6	V
Luminous Intensity	I _v	I _F =20mA	-	4.0	-	mcd
Reverse Current	I _R	V _R =5V	-	-	100	μA
Peak Wave Length	λ _p	I _F =20mA	-	640	-	nm
Dominant Wave Length	λ _d	I _F =20mA	618	-	636	nm
Spectral Line Half-width	Δλ	I _F =20mA	-	35	-	nm
Viewing Angle	2θ _{1/2}	I _F =20mA	-	130	-	deg

Typical Electro-Optical Characteristics Curves

Fig.1 Relative intensity vs. Wavelength

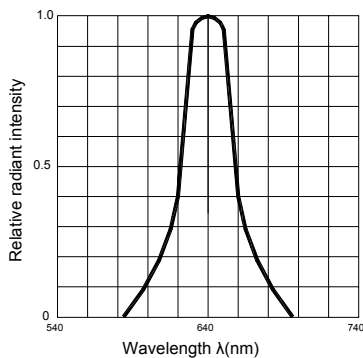


Fig.2 Forward current derating curve vs. Ambient temperature

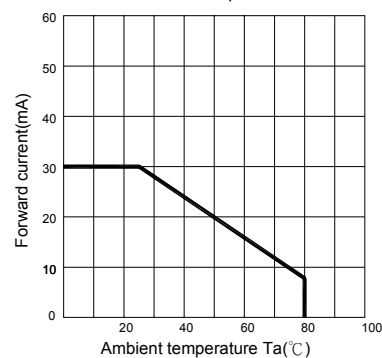


Fig.3 Forward current vs. Forward voltage

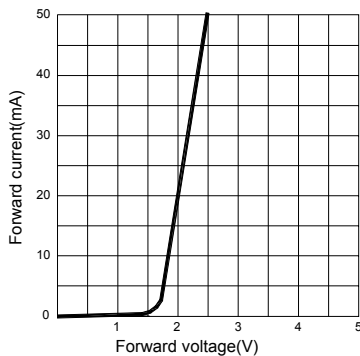


Fig.4 Relative luminous intensity vs. Ambient temperature

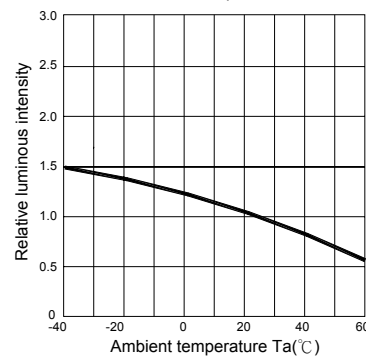


Fig.5 Relative luminous intensity vs. Forward current

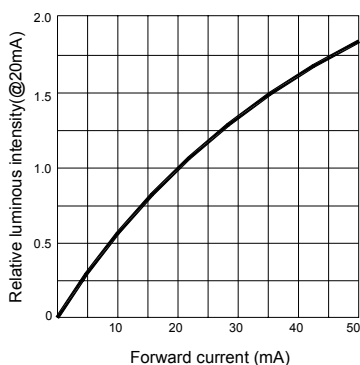
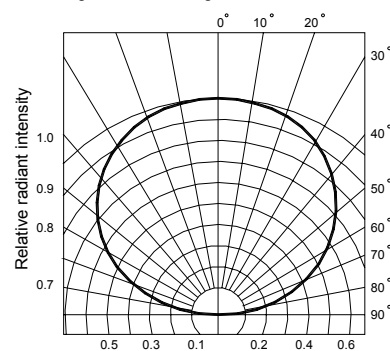


Fig.6 Radiation diagram



● Bin Limits

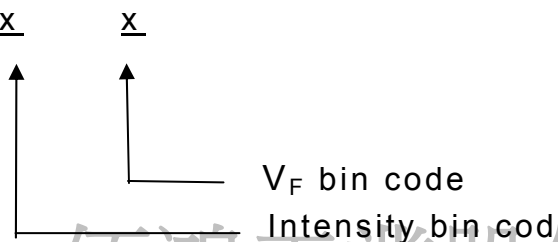
1. Intensity bin limits (At $I_F = 20\text{mA}$)

Bin Code	Min. (mcd)	Max. (mcd)
E	1.6	2.4
F	2.4	3.7
G	3.7	5.5
H	5.5	8.2
J	8.2	12.3

2. V_F Bin Limits (At $I_F = 20\text{mA}$)

Bin Code	Min. (v)	Max. (v)
B	1.8	2.0
C	2.0	2.2
D	2.2	2.4
E	2.4	2.6

● Bin : $\underline{x}$



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

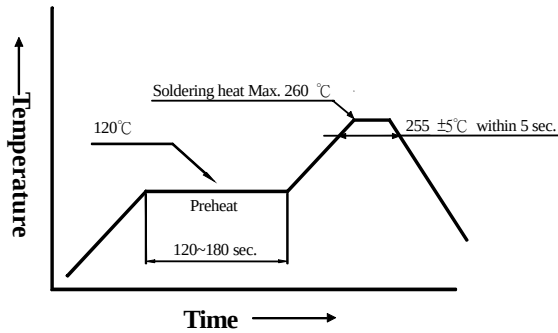
2. Tolerance of measurement of forward voltage : $\pm 0.05\text{V}$

●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).



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