

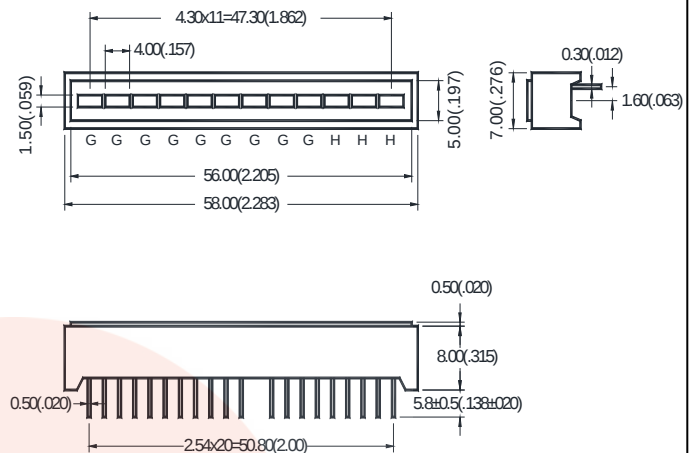
● Features :

1. Emitting area : $4.0 \times 1.5 \times 12$ (mm)
2. Low power requirement.
3. Excellent characters appearance.
4. Solid state reliability.
5. Categorized for luminous intensity.
6. Universal pin out.

● Description :

1. The BA-9G3H3UD-LC5.8 is 12 bar graph array display.
2. This product use green chips and bright red chips, the green chips are made from GaP on GaP substrate, the bright red chips are made from GaP on GaP substrate.
3. This product have a black face and white segments.
4. This product doesn't contain restriction substance, comply ROHS standard.

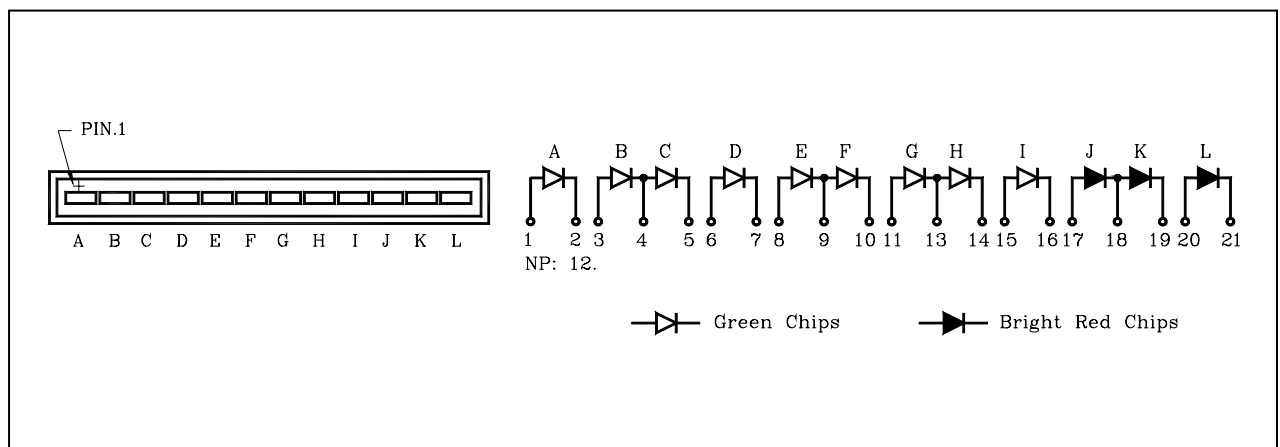
● Package Dimensions :



Notes:

1. All dimensions are in millimeters(inches).
2. Tolerance is ± 0.25 mm(.01")unless otherwise specified.
3. Specifications are subject to change without notice.

● Internal Circuit Diagram :



● **Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Green	Bright Red	Unit
Power Dissipation Per Segment	Pd	80	40	mW
Forward Current Per Segment	I _F	30	15	mA
Peak Forward Current Per Segment	I _{FP} (Duty 1/10, 1KHZ)	150	50	mA
Reverse Voltage Per Segment	V _R	5		V
Operating Temperature	Topr	-40°C ~80°C		-
Storage Temperature	Tstg	-40°C ~85°C		-
Soldering Temperature (1/16" From Body)	Tsol	260°C For 5 Seconds		-

● **Electrical And Optical Characteristics(Ta=25°C)**

Green

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage Per Segment	V _f	I _F =10mA	-	2.1	2.5	V
Luminous Intensity Per Segment	I _v	I _F =10mA	-	4.5	-	mcd
Reverse Current Per Segment	I _R	V _R =5V	-	-	100	μA
Peak Wave Length	λ _p	I _F =10mA	-	568	-	nm
Dominant Wave Length	λ _d	I _F =10mA	567	-	572	nm
Spectral Line Half-width	Δλ	I _F =10mA	-	30	-	nm

Bright Red

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage Per Segment	V _f	I _F =10mA	-	2.1	2.5	V
Luminous Intensity Per Segment	I _v	I _F =10mA	-	1.8	-	mcd
Reverse Current Per Segment	I _R	V _R =5V	-	-	100	μA
Peak Wave Length	λ _p	I _F =10mA	-	700	-	nm
Dominant Wave Length	λ _d	I _F =10mA	-	650	-	nm
Spectral Line Half-width	Δλ	I _F =10mA	-	100	-	nm

● Typical Electro-Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Relative Radiant Intensity VS. Wavelength

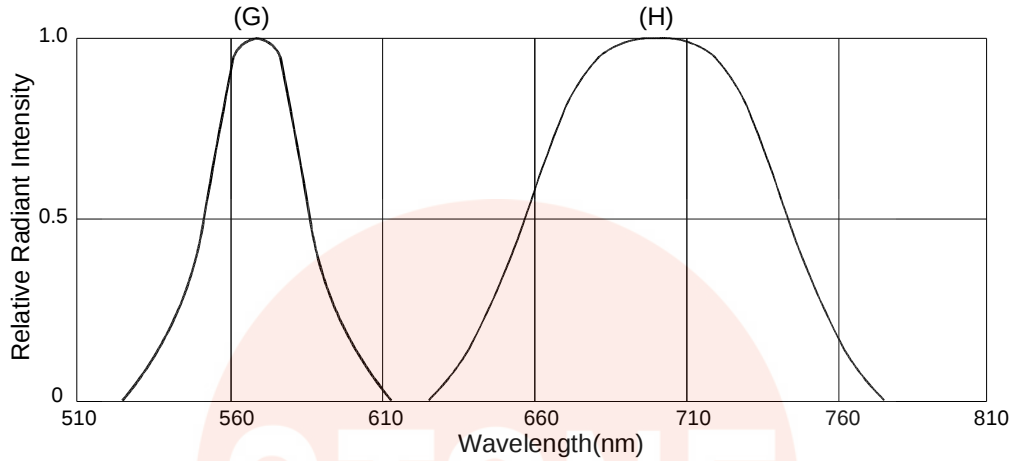


Fig.2 Forward Current VS. Forward Voltage

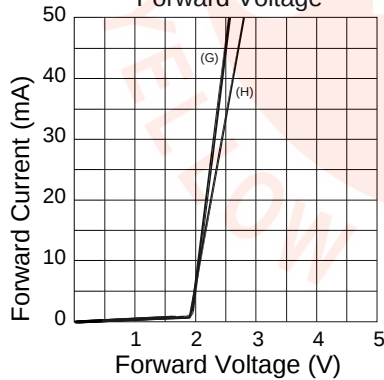


Fig.3 Relative Luminous Intensity VS. Ambient Temperature

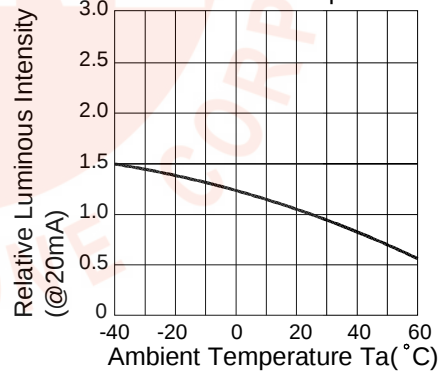


Fig.4 Relative Luminous Intensity VS. Forward Current

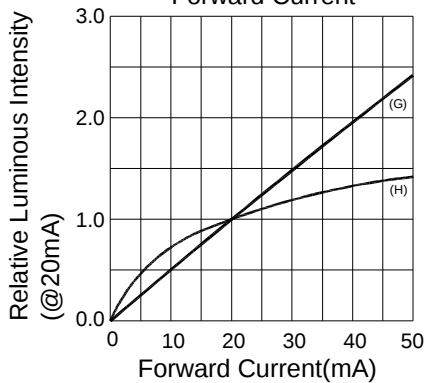
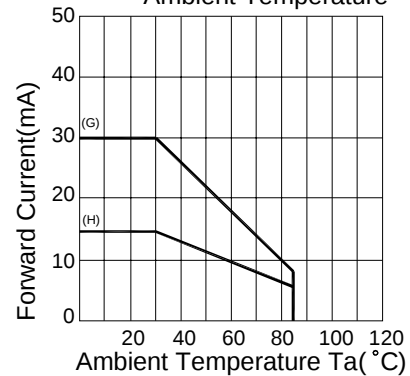


Fig.5 Forward Current Derating Curve VS. Ambient Temperature





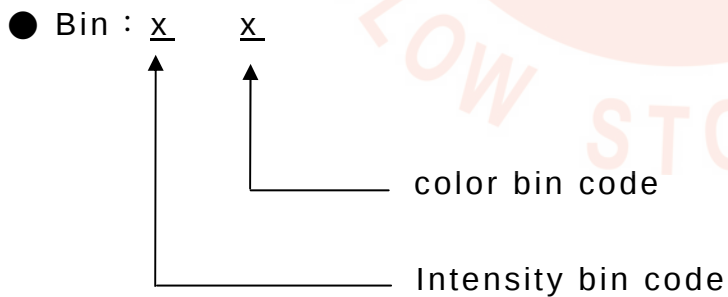
● Bin Limits

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

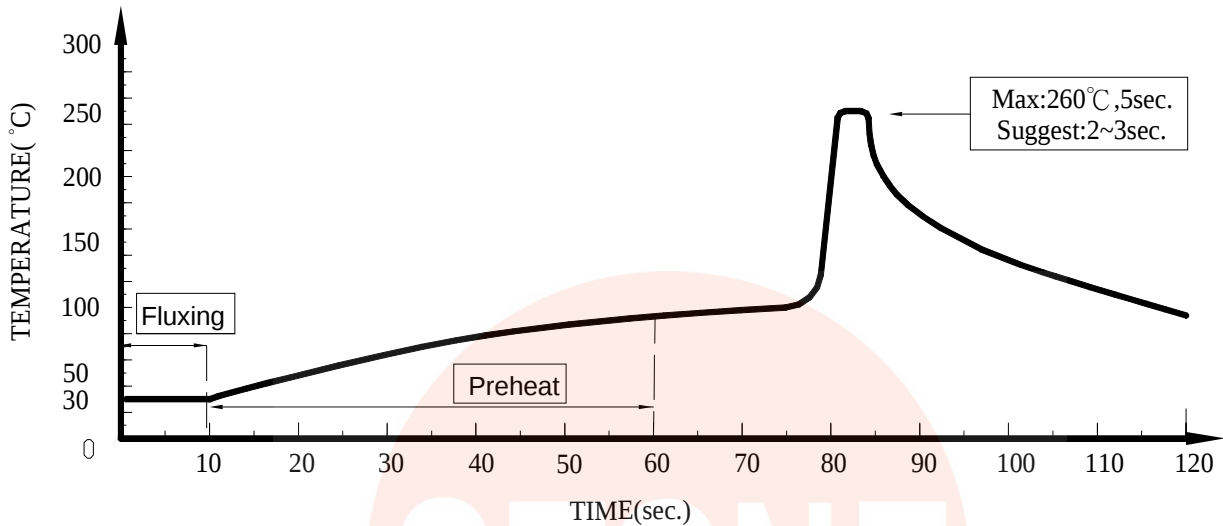
Bin Code	Min. (mcd)	Max. (mcd)
L	2.660	3.590
M	3.460	4.670
N	4.500	6.070

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

Bin Code	Min. (nm)	Max. (nm)
1	567	568
2	568.1	570
3	570.1	572



● Dip Soldering



1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

● IRON Soldering

350°C Within 3 sec., One time only.