

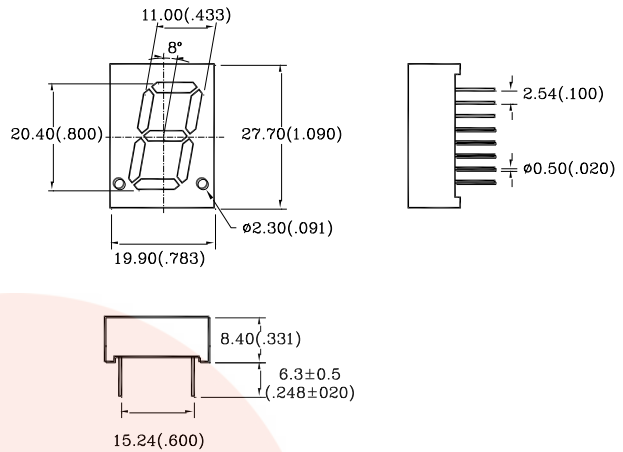
● Features :

1. 0.80 inch (20.4mm) Digit Height.
2. Continuous uniform segments.
3. Low power requirement.
4. Excellent characters appearance.
5. Solid state reliability.
6. Categorized for luminous intensity.
7. Direct drive common cathode

● Description :

1. The BS-C81UBRD is a 20.4mm (0.80") high single digit seven segments display.
2. This product use super red chips, which are made from AlGaInP on GaAs substrate.
3. This product have a black face and white segments.
4. This product doesn't contain restricted substance, comply ROHS standard.

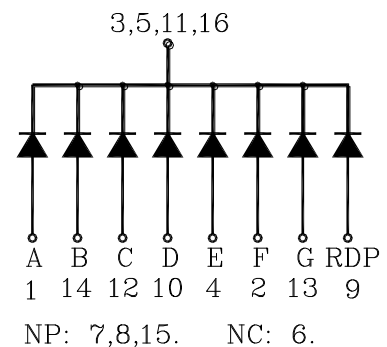
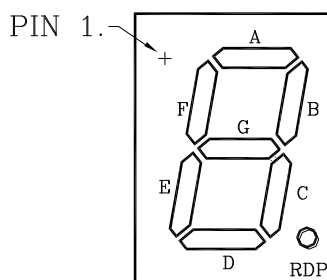
● Package Dimensions :



Notes:

1. All dimensions are in millimeters(inches).
2. Tolerance is $\pm 0.25\text{mm} (.01")$ unless otherwise specified.
3. Specifications are subject to change without notice.

● Internal Circuit Diagram :





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

Parameter	Symbol	Rating	Unit
Power Dissipation Per Segment	P_d	80	mW
Forward Current Per Segment	I_F	30	mA
Peak Forward Current Per Segment	I_{FP} (Duty 1/10, 1KHZ)	150	mA
Reverse Voltage Per Segment	V_R	5	V
Operating Temperature	T_{opr}	$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$	-
Storage Temperature	T_{stg}	$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$	-
Soldering Temperature (1/16" From Body)	T_{sol}	260°C For 5 Seconds	-

● Electrical And Optical Characteristics($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage Per Segment	V_f	$I_F=10\text{mA}$	-	2.0	2.5	V
Luminous Intensity Per Segment	I_v	$I_F=10\text{mA}$	-	12	-	mcd
Reverse Current Per Segment	I_R	$V_R=5\text{V}$	-	-	100	μA
Peak Wave Length	λ_p	$I_F=10\text{mA}$	-	645	-	nm
Dominant Wave Length	λ_d	$I_F=10\text{mA}$	627	632	637	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=10\text{mA}$	-	22	-	nm

● Typical Electro-Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Relative Radiant Intensity VS. Wavelength

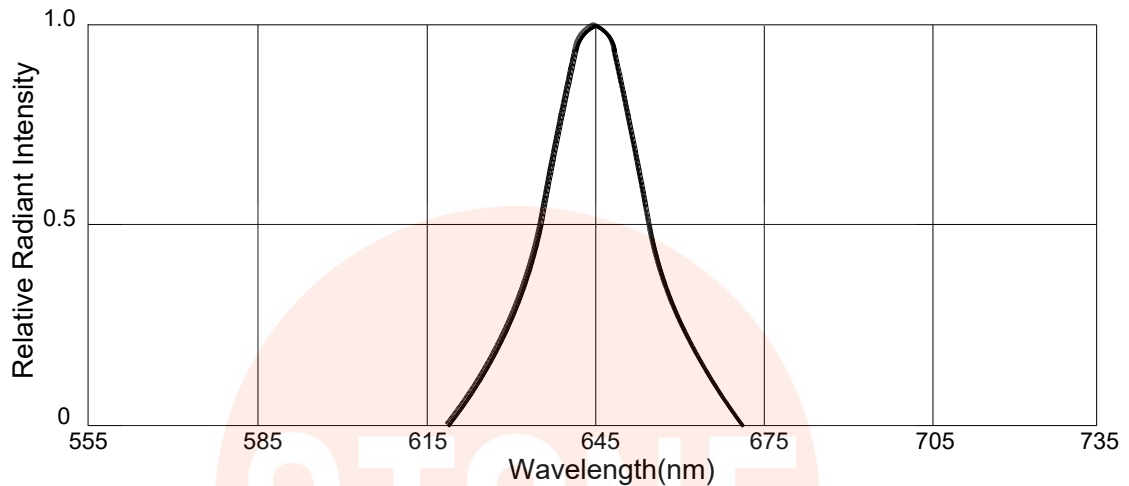


Fig.2 Forward Current VS. Forward Voltage

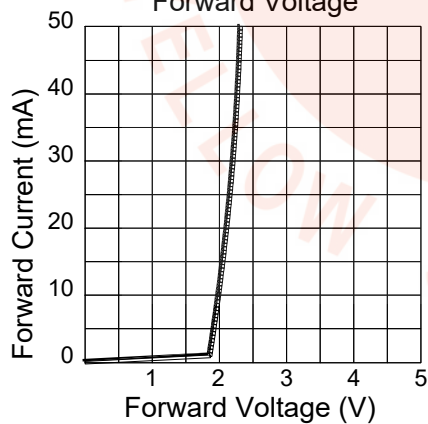


Fig.3 Relative Luminous Intensity VS. Ambient Temperature

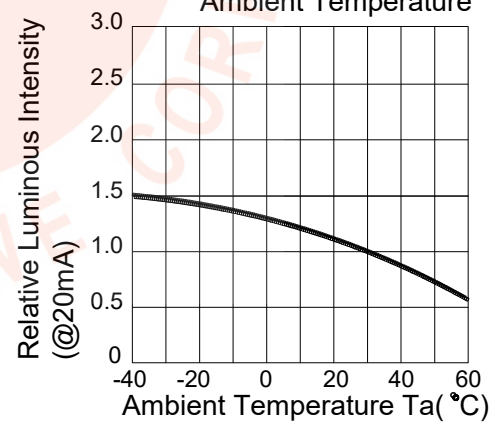


Fig.4 Relative Luminous Intensity VS. Forward Current

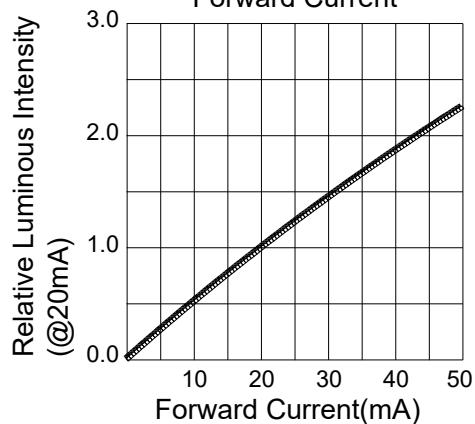
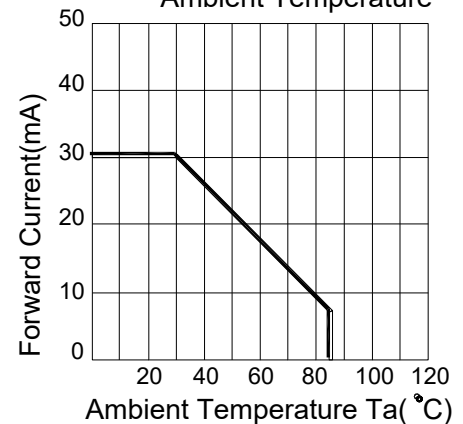
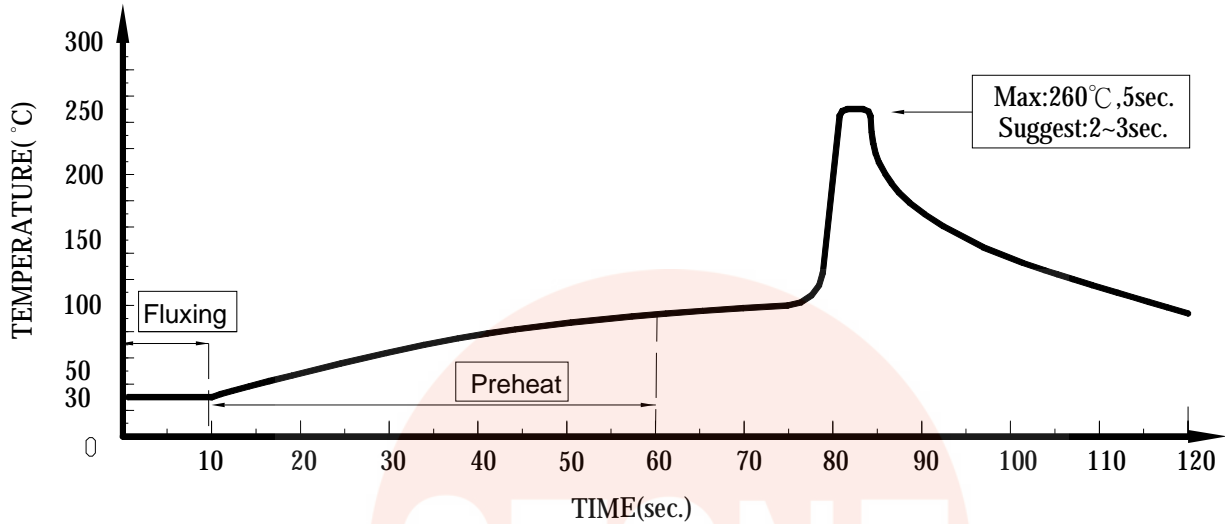


Fig.5 Forward Current Derating Curve VS. Ambient Temperature



● 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.