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LBG1000RG3B

Hi-Eff Red/Hi-Eff Green

Vertical 1.8x5mm LED Bargraphs, 10-LED BiColor

DWG BY:
GP / HF
06-19-14

R&D:
UF
06-18-24

MFG:
PP
06-17-24

QA:
GZ
06-18-24

REVISION LTR: A
ECR#: 061324-HF01
06-13-14

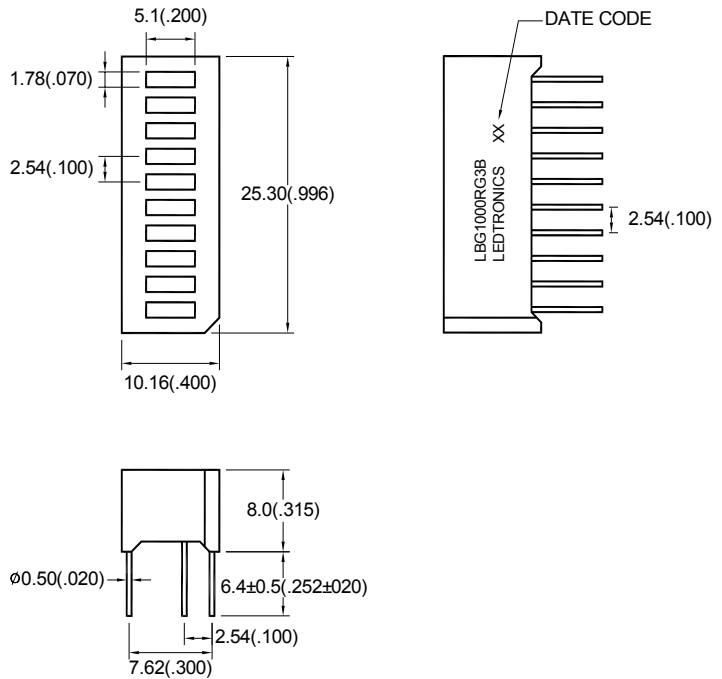
● **Features :**

1. Emitting area : 5.1×1.78×10 (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 LBG1000RG3B is 10 bar graph array display.
2. This product use hi-eff red chips and hi-eff green chips.
3. This product have a black face and white segments.
4. This product is RoHS compliant.

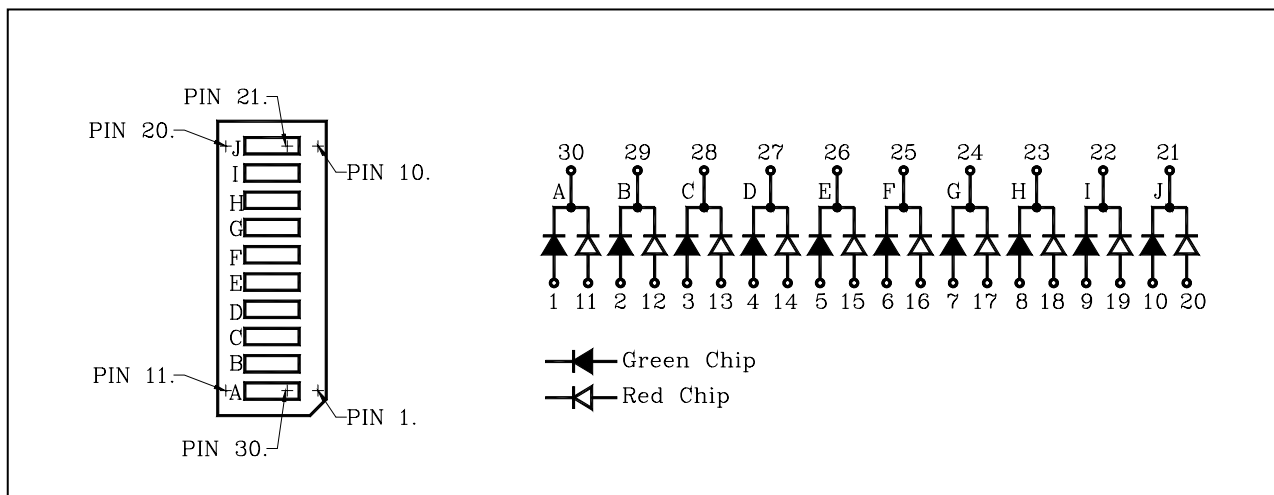
● **Package Dimensions :**



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(Ta=25°C)**

Parameter	Symbol	Hi-Eff Red	Hi-Eff Green	Unit
Power Dissipation Per Segment	Pd	80	80	mW
Forward Current Per Segment	I _F	30	30	mA
Peak Forward Current Per Segment	I _{FP} (Duty 1/10, 1KHZ)	150	150	mA
Reverse Voltage Per Segment	V _R	5		V
Operating Temperature	Topr	-40°C~85°C		-
Storage Temperature	Tstg	-40°C~85°C		-

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

Hi-Eff Red

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage Per Segment	V _f	I _F =10mA	-	1.9	2.5	V
Luminous Intensity Per Segment	I _v	I _F =10mA	-	5.0	-	mcd
Reverse Current Per Segment	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	626	-	636	nm
Spectral Line Half-width	Δλ	I _F =20mA	-	40	-	nm

Hi-Eff 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	-	8.5	-	mcd
Reverse Current Per Segment	I _R	V _R =5V	-	-	100	μA
Peak Wave Length	λ _p	I _F =20mA	-	565	-	nm
Dominant Wave Length	λ _d	I _F =20mA	566	-	572	nm
Spectral Line Half-width	Δλ	I _F =20mA	-	30	-	nm

● **Typical Electro-Optical Characteristics Curves**

(25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Relative Radiant Intensity VS. Wavelength

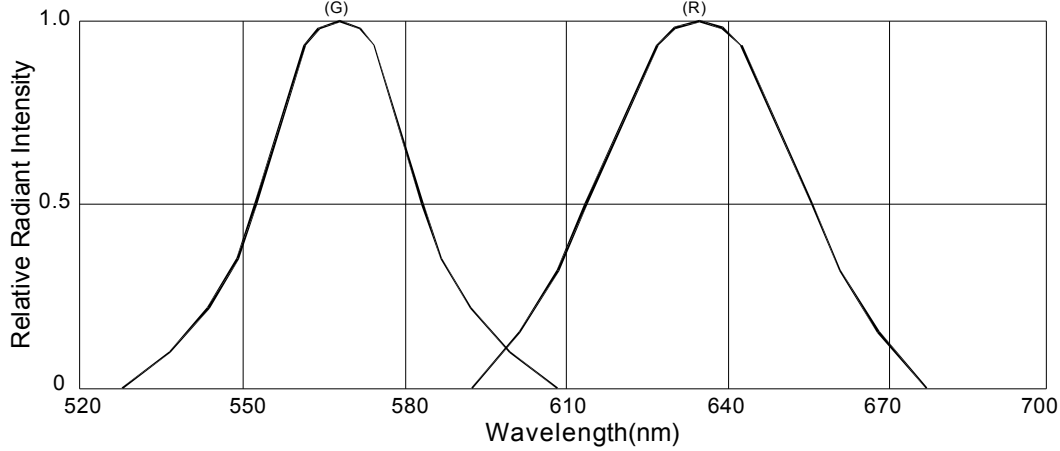


Fig.2 Forward Current VS. Forward Voltage

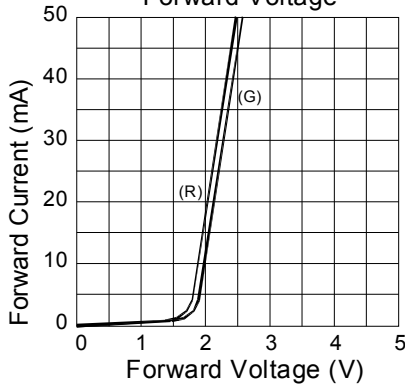


Fig.3 Relative Luminous Intensity VS. Ambient Temperature

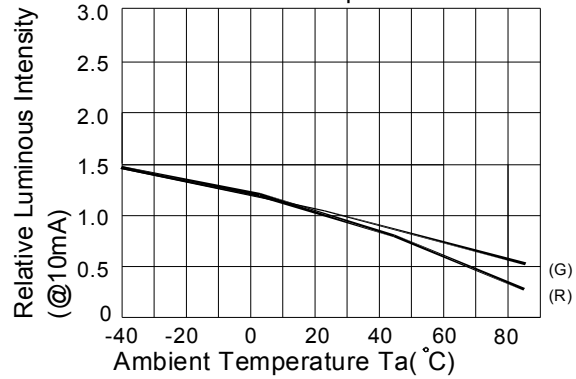


Fig.4 Relative Luminous Intensity VS. Forward Current

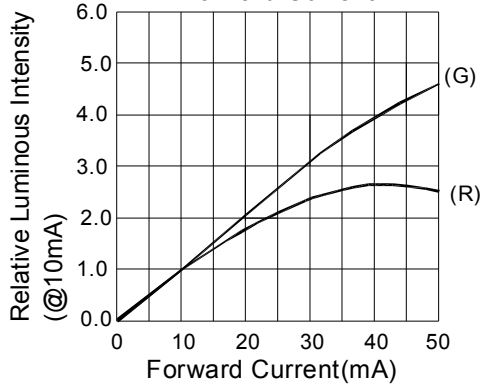
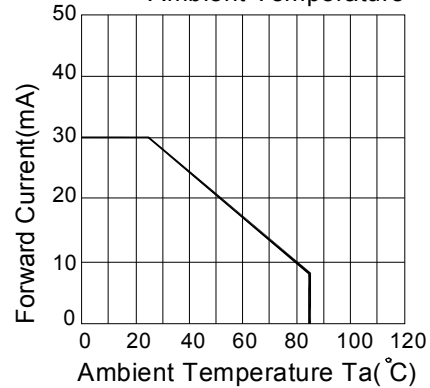
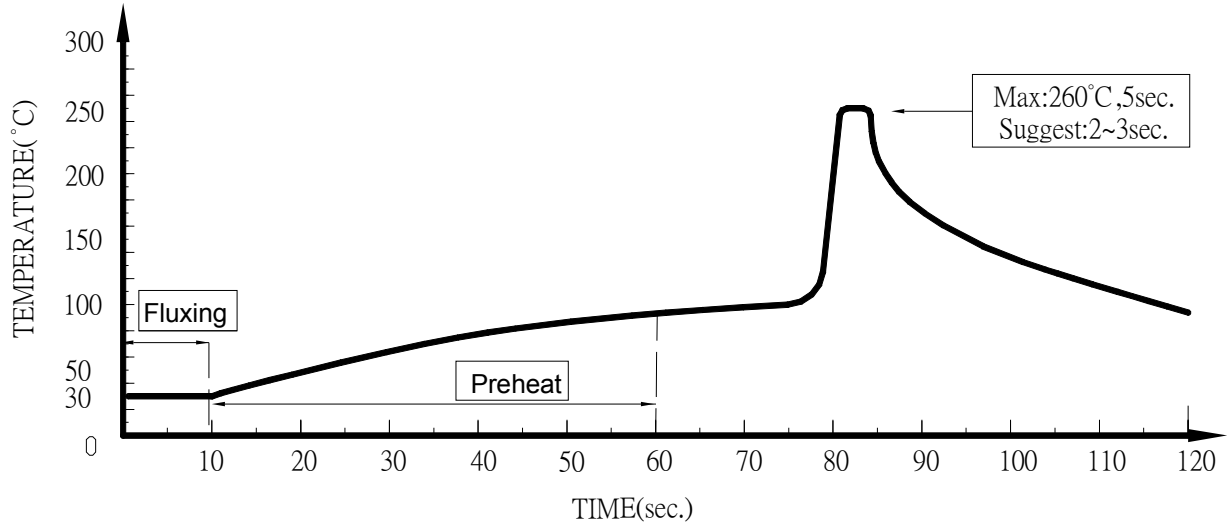


Fig.5 Forward Current Derating Curve VS. Ambient Temperature



● **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.