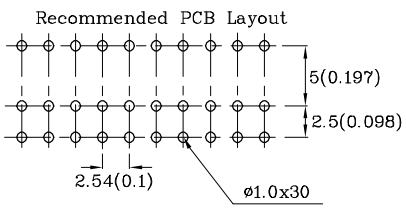
SunLED
www.SunLEDusa.com

Part Number: XGMDKVGX10D

10 Segment Bar Graph Array

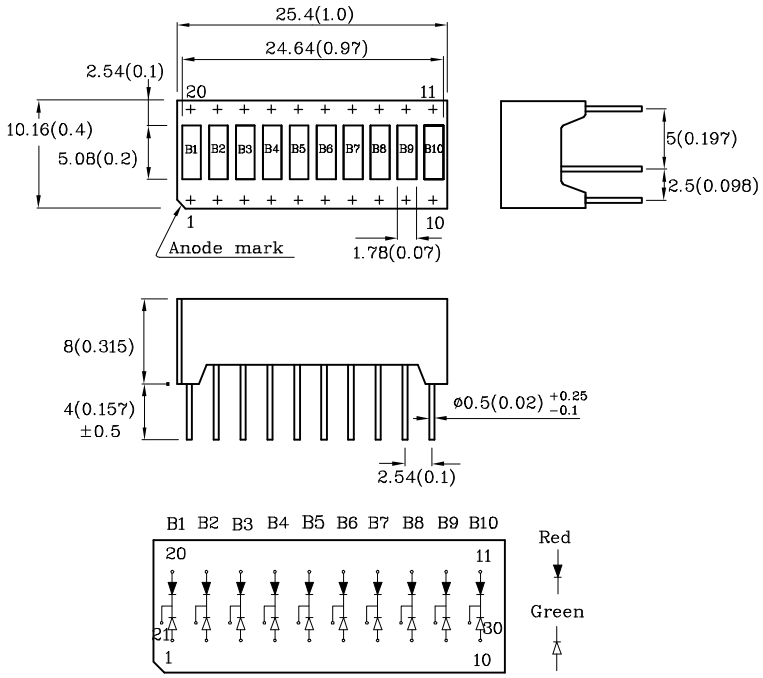
Features

- Robust package
- Uniform light disbursement
- Ideal for backlighting logos or icons
- Excellent for flush mounting
- Standard configuration: Gray face w/ white segments
- RoHS Compliant



ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

Package Schematics



Notes:
1. All dimensions are in millimeters (inches), Tolerance is ±0.25(0.01")unless otherwise noted.
2. Specifications are subject to change without notice.

Absolute Maximum Ratings (T_A=25°C)		**Red (AlGaInP)**	**Green (AlGaInP)**	**Unit**
Reverse Voltage	V_R	5	5	V
Forward Current	I_F	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i_{FS}	185	150	mA
Power Dissipation	P_D	75	75	mW
Operating Temperature	T_A	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +85		
Lead Solder Temperature [2mm Below Package Base]	260°C For 3-5 Seconds			

A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

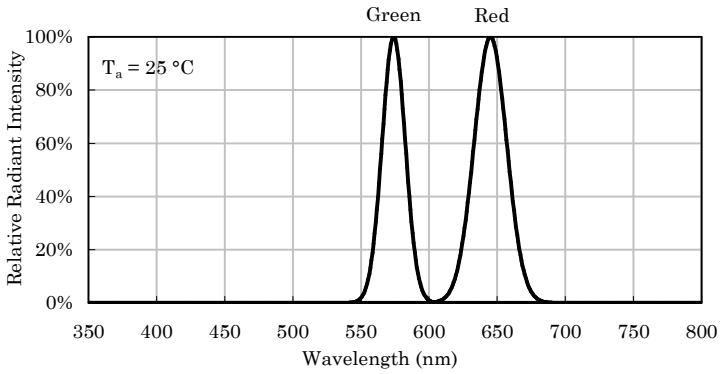
Operating Characteristics (T_A=25°C)		**Red (AlGaInP)**	**Green (AlGaInP)**	**Unit**
Forward Voltage (Typ.) (I_F= 10mA)	V_F	1.85	2.0	V
Forward Voltage (Max.) (I_F= 10mA)	V_F	2.35	2.45	V
Reverse Current (V_R=5V)	I_R	10	10	µA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I_F=10mA)	λP	645*	574*	nm
Wavelength of Dominant Emission CIE127-2007*(Typ.) (I_F=10mA)	λD	630*	570*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I_F=10mA)	△λ	28	20	nm
Capacitance (Typ.) (V_F=0V, f=1MHz)	C	35	15	pF

Part Number	Emitting Color	Emitting Material	Luminous Intensity CIE127-2007* (IF=10mA) ucd min.	Luminous Intensity CIE127-2007* (IF=10mA) ucd typ.	Wavelength CIE127-2007* nm λP	Description
XGMDKVGX10D	Red	AlGaInP	31000 9000*	99990 24990*	645*	10 Segments Bar graph-Display
	Green	AlGaInP	14000 3600*	27990 7990*	574*	

*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

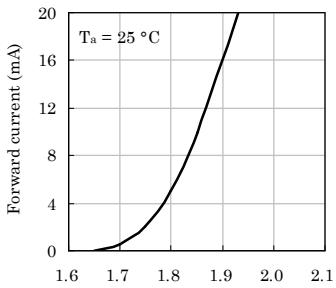
Nov 13,2020

XDSB0834 V3-X Layout: Maggie L.

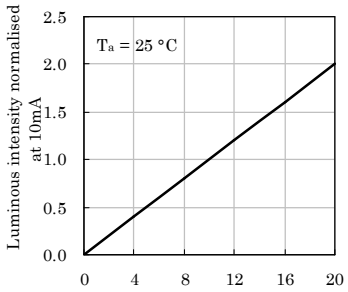


Relative Intensity Vs. CIE Wavelength

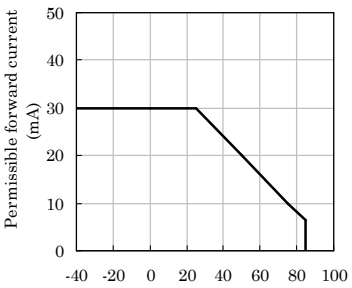
❖ Red



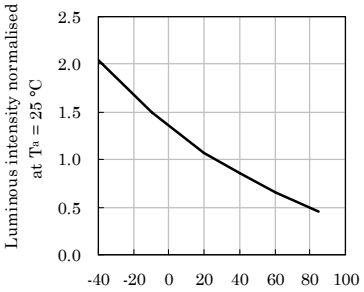
Forward Current vs.
Forward Voltage



Luminous Intensity vs.
Forward Current

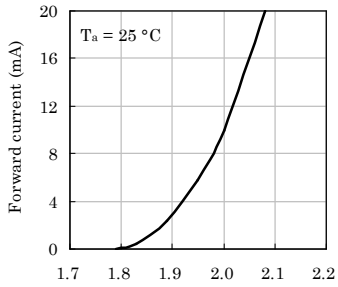


Forward Current
Derating Curve

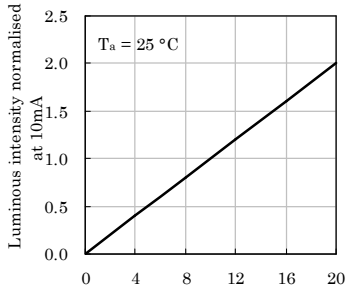


Luminous Intensity vs.
Ambient Temperature

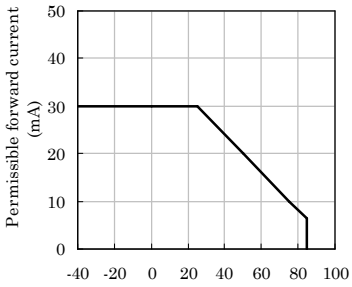
❖ Green



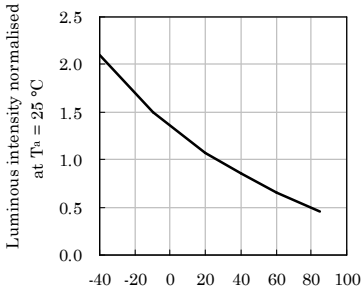
Forward Current vs.
Forward Voltage



Luminous Intensity vs.
Forward Current

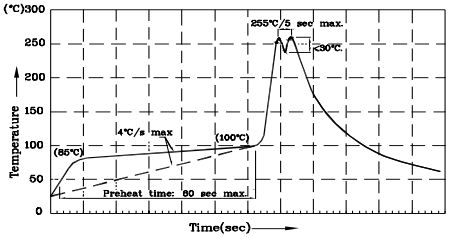


Forward Current
Derating Curve



Luminous Intensity vs.
Ambient Temperature

Wave Soldering Profile for Thru-Hole Products (Pb-Free Components)



Notes:
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.
7. During wave soldering, the PCB top-surface temperature should be kept below 105°C.

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity / luminous flux, or wavelength),

the typical accuracy of the sorting process is as follows:

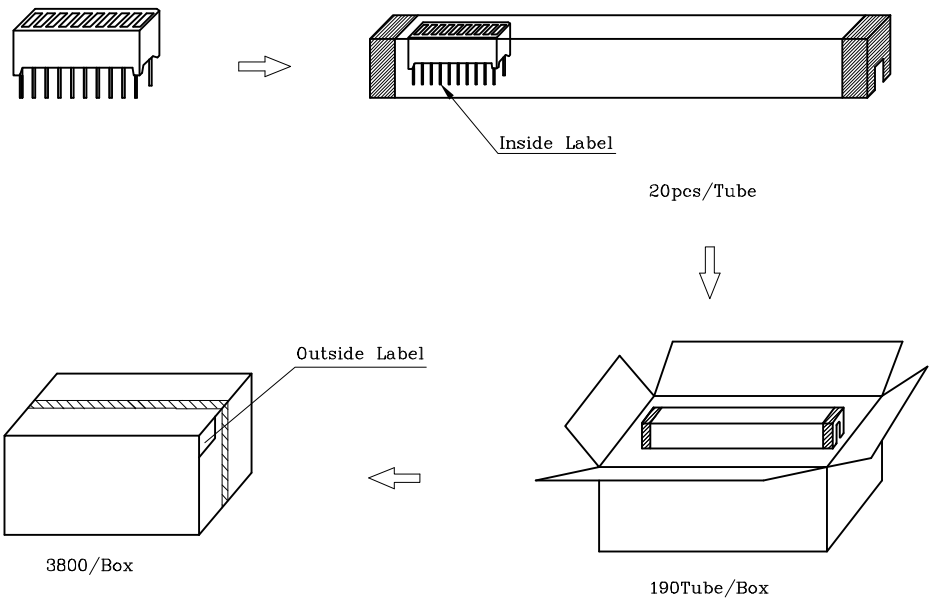
1. Wavelength: +/-1nm

2. Luminous Intensity / Luminous Flux: +/-15%

3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

PACKING & LABEL SPECIFICATIONS



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