





#### **Features**

- 0.2 inch digit height
- Robust package
- Low power consumption
- $\bullet$  Standard configuration: Gray face w/ white segments
- Standard Package: 650pcs/ Reel
- MSL (Moisture Sensitivity Level): 2a
- RoHS compliant

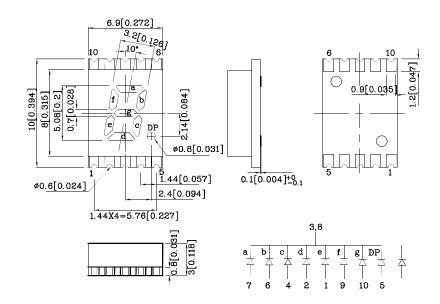






# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

# Package Schematics



#### Notes

- 1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25 (0.01")$  unless otherwise noted.
- 2. Specifications are subject to change without notice.
- 3. The gap between the reflector and PCB shall not exceed 0.25mm.

Absolute Maximum Ratings (T <sub>A</sub> =25°C)	Red (AlGaInP)	Unit		
Reverse Voltage	$V_{\mathrm{R}}$	5	V	
Forward Current	$I_{\mathrm{F}}$	30	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	$i_{\mathrm{FS}}$	185	mA	
Power Dissipation	$P_D$	75	mW	
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85		

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)

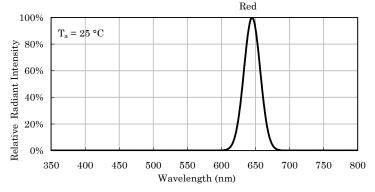
Operating Characteristics (T <sub>A</sub> =25°C)		Red (AlGaInP)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =10mA)	$V_{\mathrm{F}}$	1.85	V
Forward Voltage (Max.) (I <sub>F</sub> =10mA)	$V_{\mathrm{F}}$	2.35	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_{\mathrm{R}}$	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =10mA)	λΡ	645*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =10mA)	λD	630*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =10mA)	$\triangle \lambda$	28	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	35	pF

Part Number	Emitting Color	Emitting Material	Luminous Intensity CIE127-2007* $(I_F=10\text{mA})$ ucd		Wavelength CIE127-2007* nm λP	Description
			min.	typ.		
XZFMDK05C	Red	AlGaInP	14000 3600*	29990 8090*	645*	Common Cathode, Rt. Hand Decimal.

<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards. Nov 07.2018

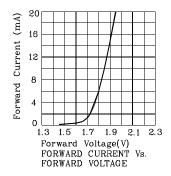


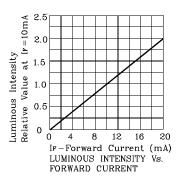


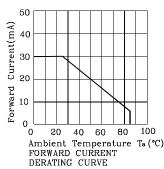


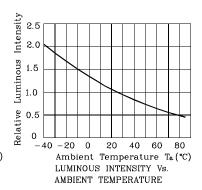
Relative Intensity Vs. CIE Wavelength

## **♦** Red



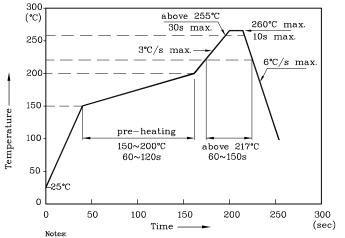






# LED is recommended for reflow soldering and soldering profile is shown below.

Reflow Soldering Profile for SMD Products (Pb-Free Components)

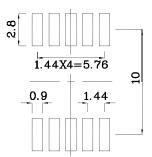


- 1. All temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
- Do not apply any stress to the LED during high temperature conditions.
   Maximum number of soldering passes: 2

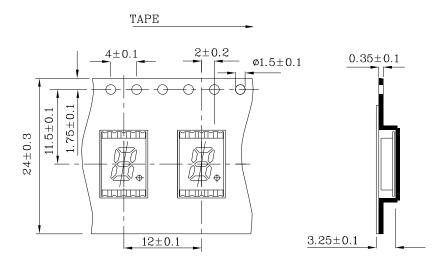




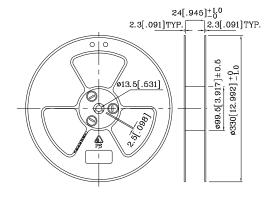
# **❖** Recommended Soldering Pattern (Units: mm; Tolerance: ±0.15)



# **❖** Tape Specification (Units:mm)



# \* Reel Dimension



#### 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:

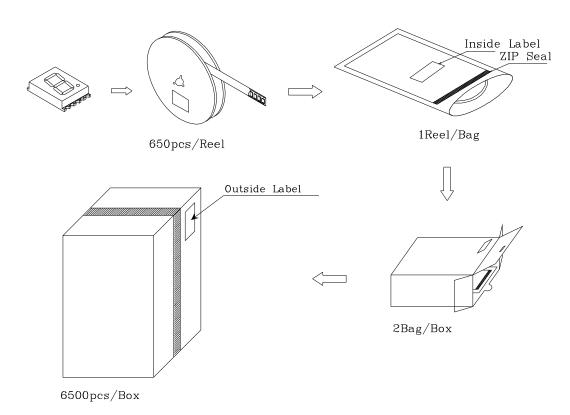
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

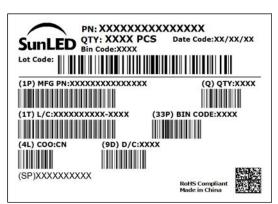
Note: Accuracy may depend on the sorting parameters.





## PACKING & LABEL SPECIFICATIONS





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- 2. Contents within this document are subject to improvement and enhancement changes without notice.
- 3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
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- 7. Additional technical notes are available at <a href="https://www.SunLEDusa.com/TechnicalNotes.asp">https://www.SunLEDusa.com/TechnicalNotes.asp</a>

Nov 07,2018