

### **Features**

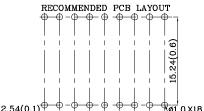
- Low power consumption
- Robust package
- I.C. Compatible
- Standard configuration: Gray face w/ white segments

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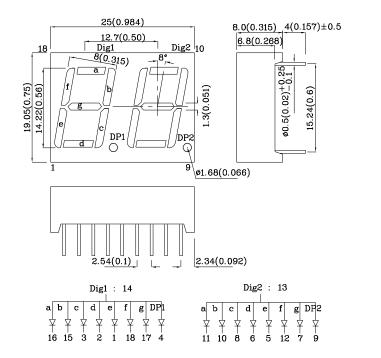
- Optional black face provides superior color contrast
- RoHS Compliant







# **Package Schematics**



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.

Absolute Maximum Ratings (T <sub>A</sub> =25°C)		Red (GaAsP/GaP)	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	ifs	160	mA
Power Dissipation	$P_{D}$	75	mW
Operating Temperature	$T_{A}$	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	-0
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 <sub>A</sub> =25°C)	Red (GaAsP/GaP)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =10mA)	$V_{\mathrm{F}}$	1.9	V
Forward Voltage (Max.) (I <sub>F</sub> =10mA)	$V_{\mathrm{F}}$	2.3	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_R$	10	μА
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =10mA)	λР	627*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =10mA)	λD	617*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =10mA)	Δλ	45	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	15	pF

			Luminous Intensity	Wavelength	
Part	Emitting	Emitting	CIE127-2007*	CIE127-2007*	Description
Number	$\operatorname{Color}$	Material	$(I_F=10\text{mA})$	nm	Description
			ned	λP	

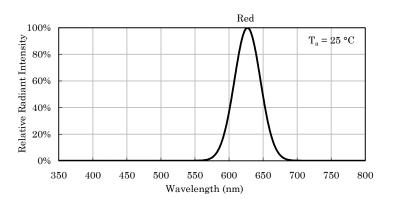
			min.	typ.		
XDUR14A2	Red	GaAsP/GaP	3600 1400*	7990 2390*	627*	Common Anode, Rt.Hand Decimal.

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

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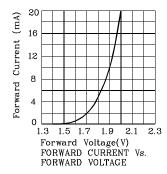
XDSA1000 V7-X Layout: Maggie L.

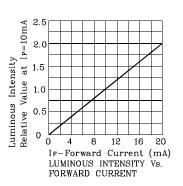


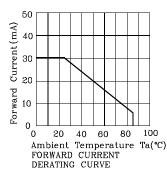


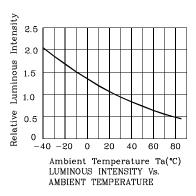
Relative Intensity Vs. CIE Wavelength

### ❖ Red

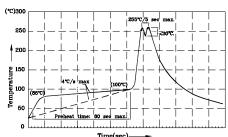








Wave Soldering Profile for Thru-Hole Products (Pb-Free Components)



- 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
- 2.Peak wave soldering temperature between 245°C ~ 255°C for 3 secmax).
  3.Do not apply stress to the epoxy resin while the temperature is a 4.Pixtures should not incur stress on the component when mounting 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),

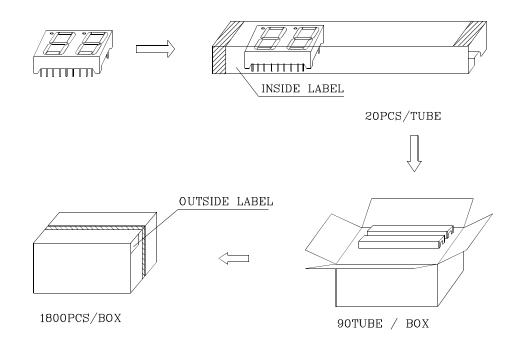
the typical accuracy of the sorting process is as follows:

- 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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- 2. Contents within this document are subject to improvement and enhancement changes without notice.
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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>

Feb 20,2019 XDSA1000 V7-X Layout: Maggie L.