

Part Number: XZM2CYKCRKDG92W-3

3.5X3.5mm SURFACE MOUNT SMD CHIP LED

Features

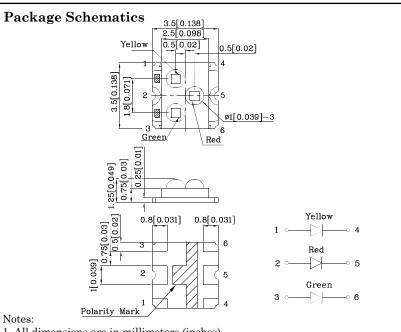
- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS compliant



DISCHARGE

SENSITIVE DEVICES

ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC



1. All dimensions are in millimeters (inches).

2. Tolerance is $\pm 0.1(0.004")$ unless otherwise noted.

3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T _A =25°C)		Yellow (AlGa InP)	Red (AlG InP)	Green (InG aN)	Unit	Operating Characteristics (T _A =25°C)		Yellow (AlGa InP)	Red (AlGa InP)	Green (InG aN)	U
Reverse Voltage	V_{R}	5	5	5	V	Forward Voltage (Typ.)	$V_{\rm F}$	2	2.2	3.3	v
Forward Current	$I_{\rm F}$	30	30	25	mA	(I _F =20mA)					
Forward Current (Peak) 1/10 Duty Cycle	ifs	140	150	150	mA	Forward Voltage (Max.) (I _F =20mA)		2.5	2.8	4.1	v
0.1ms Pulse Width	-15					Reverse Current (Max.)	IR	10	10	50	uA
Power Dissipation	PD	75	84	102.5	mW	$(V_R=5V)$		10	10		
Electrostatic Discharge Threshold (HBM)		3000	3000	450	v	Wavelength of Peak Emission CIE127-2007*(Typ.) (I _F =20mA)	λP	590*	640*	515*	nn
Operating Temperature	perating Temperature T _A					Wavelength of Dominant					
Storage Temperature	Tstg	-40 ~ +85 Tstg		Emission CIE127-2007*(Typ.)		λD	590*	625*	525*	nm	
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)						$\begin{array}{l} (I_{\rm F}=20{\rm mA}) \\ \\ \mbox{Spectral Line Full Width} \\ \mbox{At Half-Maximum (Typ.)} \\ (I_{\rm F}=20{\rm mA}) \end{array}$	$ riangle \lambda$	20	20	30	nm
						$\begin{array}{l} Capacitance \mbox{(Typ.)} \\ \mbox{(V_F=0V, f=1MHz)} \end{array}$	С	45	27	45	pF

Part Number	Emitting Color		Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I _F =20mA) mcd		Wavelength CIE127-2007* nm λΡ	Viewing Angle 20 1/2	
					min.	typ.			
XZM2CYKCRKDG92W-3	Y	Yellow	AlGaInP		1000 1000*	1590 1590*	590*		
	2W-3	Red AlGaInP		Water Clear	2700 700*	3590 1195*	640*	50°	
	(Green	InGaN		1000 1000*	$1590 \\ 1590*$	515*		

*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards. Mar 17,2017

XDSB8919 V1-X Layout: Maggie L.



Green Yellow Red 100%**Relative Radiant Intensity** $T_a = 25 \ ^\circ C$ 80% 60% 40% 20% 0% 350400 450550600 650 700 750800 500Wavelength (nm) Relative Intensity Vs. CIE Wavelength Yellow

IF = 20 mA

Luminous Intensity Value at I 0.1 U

Relative

2.5

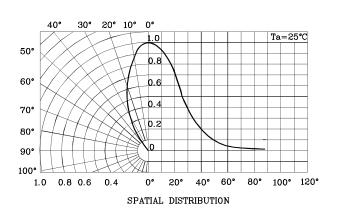
2.0

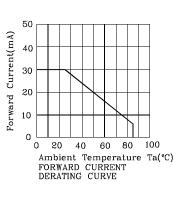
0.5

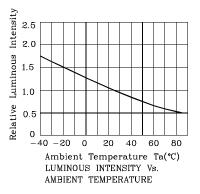
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0

3.5X3.5mm SURFACE MOUNT SMD CHIP LED







* Red

50

40

30

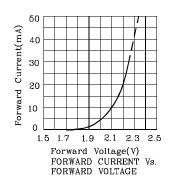
20

10

0

1.5 1.7

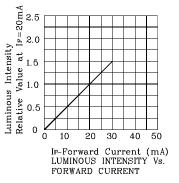
Forward Current(mA)



1.9 2.1 2.3 2.5

Forward Voltage(V)

FORWARD CURRENT Vs FORWARD VOLTAGE



20 30

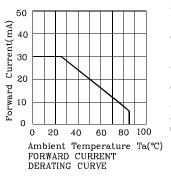
IF-Forward Current (mA)

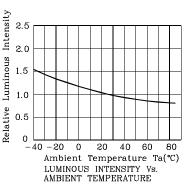
LUMINOUS INTENSITY VS. FORWARD CURRENT

10

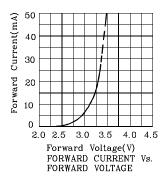
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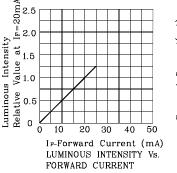
40

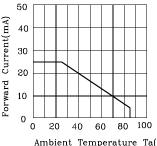




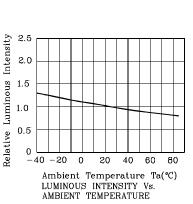








Ambient Temperature Ta(°C) FORWARD CURRENT DERATING CURVE

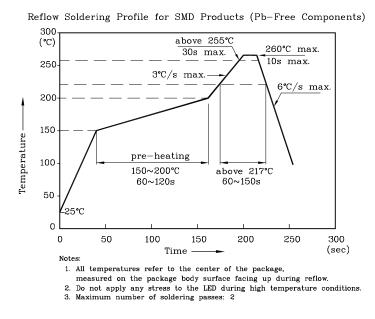


XDSB8919 V1-X Layout: Maggie L.

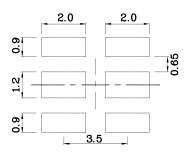


LED is recommended for reflow soldering and soldering profile is shown below.

The device has a single mounting surface. The device must be mounted according to the specifications.



Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Tape Specification (Units : mm)

e.ozfego.oh.z 33.5[1.319] TAPE 16.55[0.652]±0.2 12.323) ø1.50^{+0.1} 2±0.1 75±0. 4<u>±0.0</u>5 30[1.181] 0.25±0.05 .±[800 42±0.1 Æ ⊕ \oplus Ć € £ ø178[7. 2±0.2 321 5±0. 6[0.236] 00 00 6 5 3.75±0. 8±0.1 83[3.268] 13.7[0.539]±0.2

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%

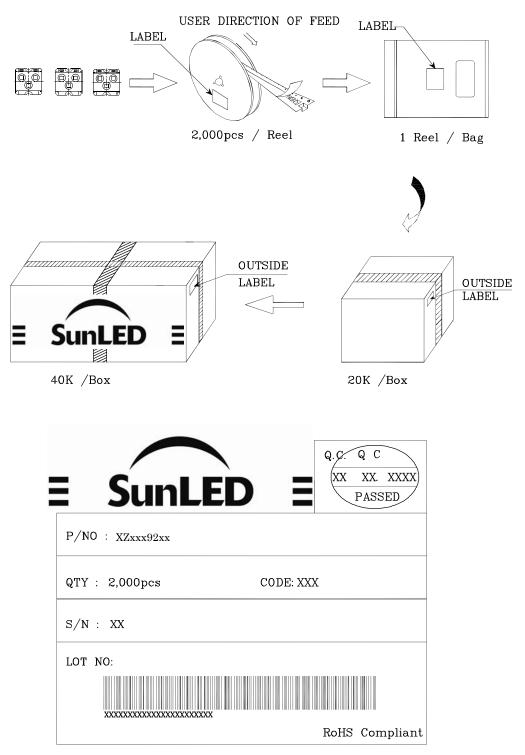
3. Forward Voltage: +/-0.1V $\,$

Note: Accuracy may depend on the sorting parameters.

Reel Dimension



PACKING & LABEL SPECIFICATIONS



TERMS OF USE

- 1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
- 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.
- 4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
- 5. The contents within this document may not be altered without prior consent by SunLED.
- 6. Additional technical notes are available at <u>http://www.SunLEDusa.com/TechnicalNotes.asp</u>

Mar 17,2017