

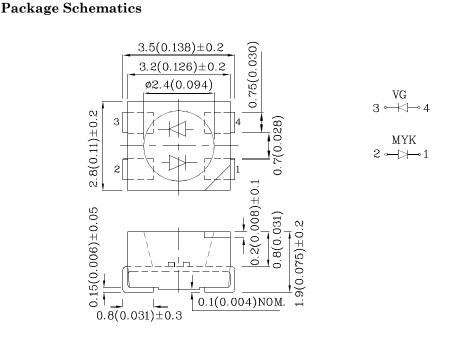
## Part Number: XZMYKVG45S

3.5x2.8mm PLCC4 SMD LED

### Features

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2000pcs/ Reel
- $\bullet$  MSL (Moisture Sensitivity Level): 3
- $\bullet$  RoHS compliant.





Notes:

1. All dimensions are in millimeters (inches).

2. Tolerance is  $\pm 0.25 (0.01")$  unless otherwise noted.

3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T <sub>A</sub> =25°C)		MYK (AlGaInP)	VG (AlGaInP)	Unit
Reverse Voltage	$V_{\mathrm{R}}$	5	5	V
Forward Current	$I_{\rm F}$	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	175	150	mA
Power Dissipation	$P_{D}$	75	75	mW
Operating Temperature	$T_{\rm A}$	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +85		C

Operating Characteristics (T <sub>A</sub> =25°C)	MYK (AlGaInP)	VG (AlGaInP)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\rm F}$	2	2.1	v
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\rm F}$	2.5	2.5	v
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_R$	10	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λP	590*	574*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λD	590*	570*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$ riangle\lambda$	20	20	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	20	15	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I <sub>F</sub> =20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZMYKVG45S —	Yellow	AlGaInP	Water Clear -	120*	238*	590*	120°
	Green	AlGaInP		40*	79*	574*	

\*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards. Mar 07,2014

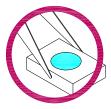
XDSB5017 V4-Z Layout: Maggie L.



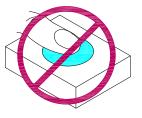
## **Handling Precautions**

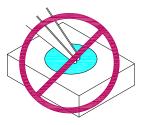
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools.

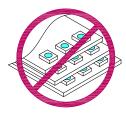


2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



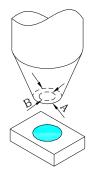


3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



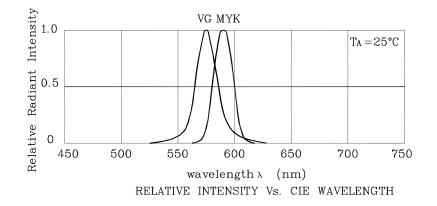
4.1. The inner diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks.

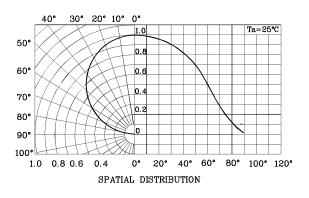
4.2. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.4.3. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



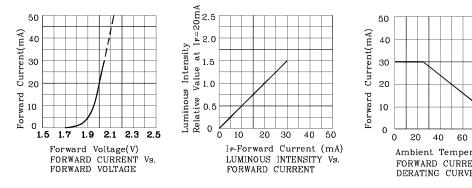
5. As silicone encapsulation is permeable to gases, some corrosive substances such as H<sub>2</sub>S might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.

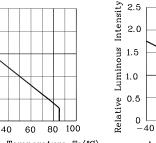




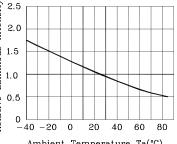


♦ MYK



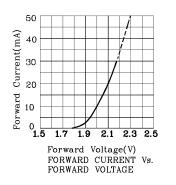


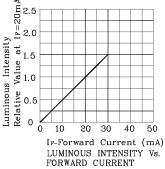
Ambient Temperature Ta(°C) FORWARD CURRENT DERATING CURVE

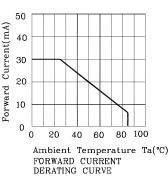


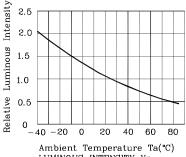
Ambient Temperature Ta(°C) LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

♦ VG











300 (°C)

250

200

150

100

50

Notes

Temperature

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

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

4°C/s

80~120

100

high temperatures conditions

Tape Specification (Units : mm)

Tim

2. Recommended reflow temperature: 145°C-260°C 3. Do not put stress to the epoxy resin during

150

Maximum soldering temperature should not exceed 260°C

200

150~180°C

4℃/s max

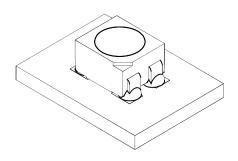
10 8

C/s r

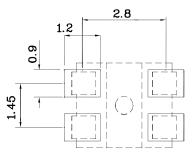
250

300 (sec)

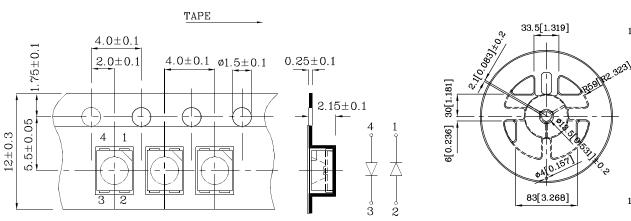
**\*** The device has a single mounting surface. The device must be mounted according to the specifications.



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



# 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.

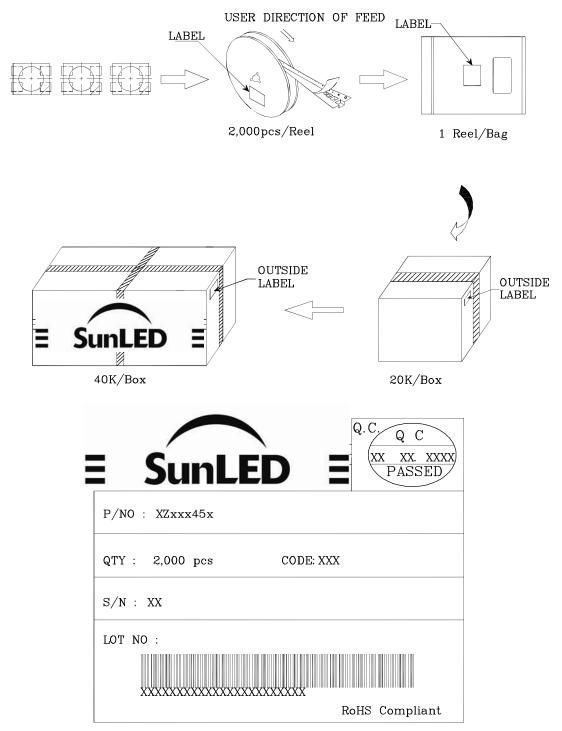
16.55[0.652]±0.2

13.7[0.539]±0.2

ø178[7.008]±



## 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.
- $6. \ Additional \ technical \ notes \ are \ available \ at \ \underline{http://www.SunLEDusa.com/TechnicalNotes.asp}$

Mar 07,2014