PRELIMINARY SPEC

Part Number: KA-3529SES-L1 RED-ORANGE

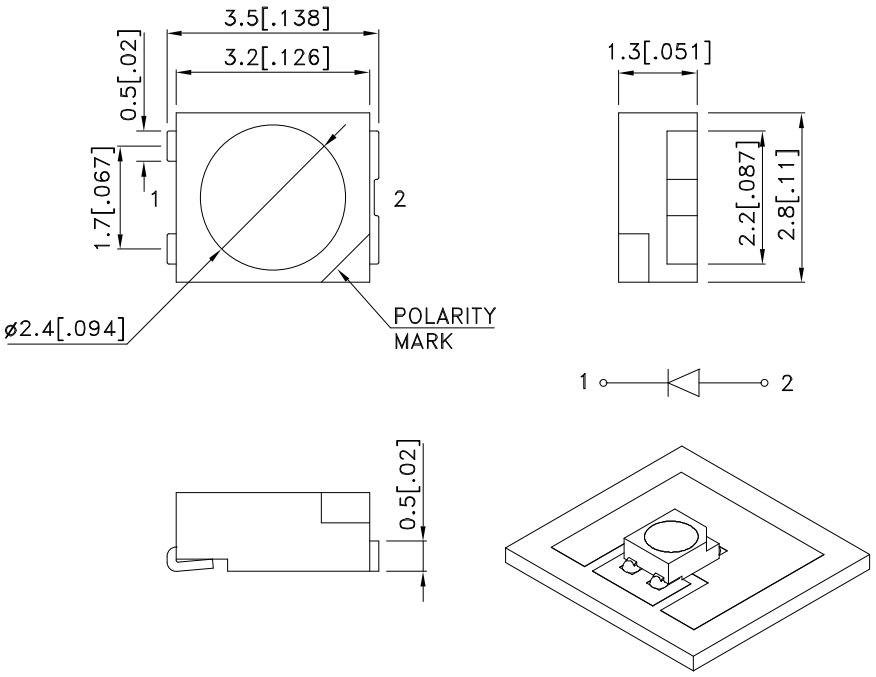
Features

- SINGLE COLOR.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- IDEAL FOR BACKLIGHTING.
- WHITE SMD PACKAGE, SILICONE RESIN.
- LOW THERMAL RESISTANCE.
- PACKAGE: 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 2a.
- RoHS COMPLIANT.

Description

The Red-orange device is made with TS AlInGaP light emitting diode.

Package Dimensions

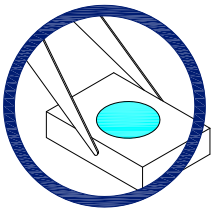


Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

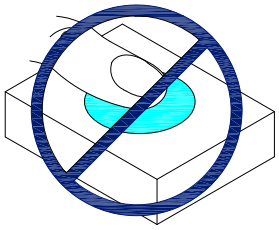
Handling Precautions

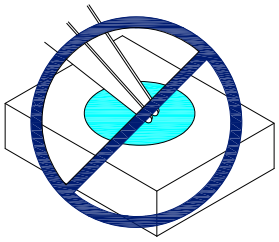
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.
As a result, special handling precautions need to be observed during assembly using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

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

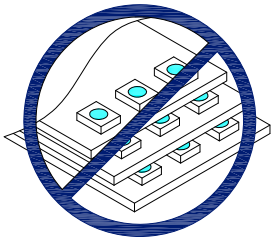


2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

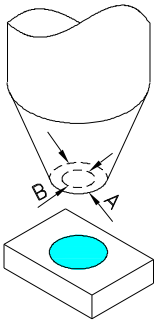




3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



4. The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 150mA		Φv (mlm) [2] @ 150mA		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2θ1/2
KA-3529SES-L1	RED-ORANGE (AlInGaP)	WATER CLEAR	3800	6000	2500	4000	120°

Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity / luminous flux: +/-15%.

Absolute Maximum Ratings at T_A=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P_t	615	mW
Junction Temperature [1]	T_J	110	°C
Operating Temperature	Top	-40 To +85	°C
Storage Temperature	Tstg	-40 To +85	°C
DC Forward Current [1]	I_F	150	mA
Peak Forward Current [2]	I_{FM}	350	mA
Thermal Resistance [1] (Junction/ambient)	$R_{th\ j\text{-}a}$	200	°C/W
Thermal Resistance [1] (Junction/solder point)	$R_{th\ j\text{-}S}$	80	°C/W

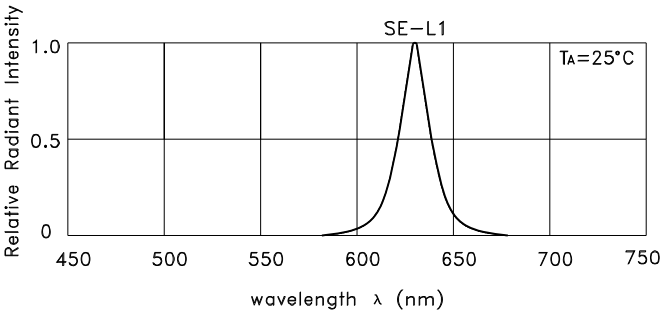
Notes:
1.Results from mounting on PC board FR4(pad size≥70mm^2), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.
2.1/10 Duty Cycle, 0.1ms Pulse Width.

Electrical / Optical Characteristics at T_A=25°C

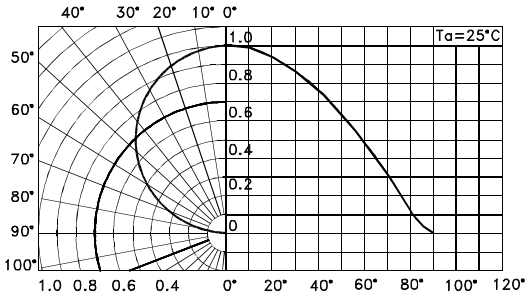
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Red-orange	626		nm	I_F=150mA
λD [1]	Dominant Wavelength	Red-orange	618		nm	I_F=150mA
Δλ1/2	Spectral Line Half-width	Red-orange	20		nm	I_F=150mA
C	Capacitance	Red-orange	25		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Red-orange	3.6	4.1	V	I_F=150mA
I_R	Reverse Current	Red-orange		10	uA	V_R = 5V

Notes:
1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

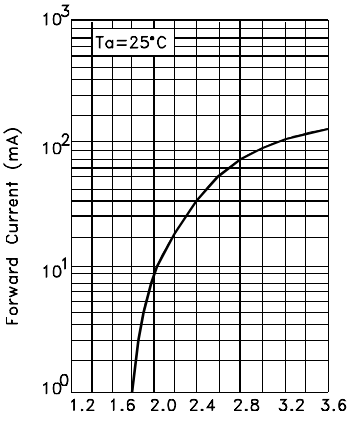
Red-orange **KA-3529SES-L1**



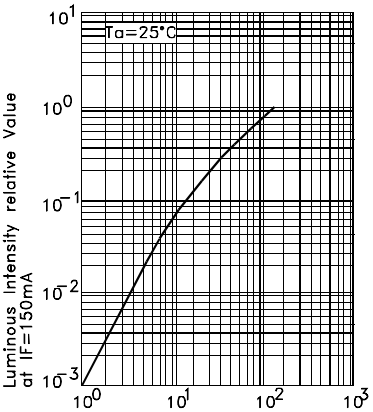
RELATIVE INTENSITY Vs. WAVELENGTH



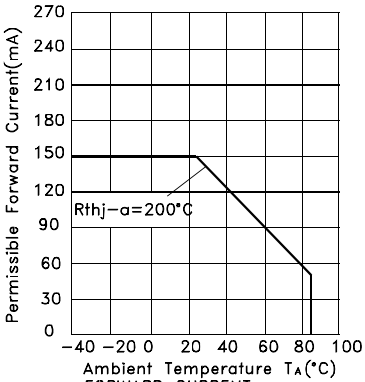
SPATIAL DISTRIBUTION



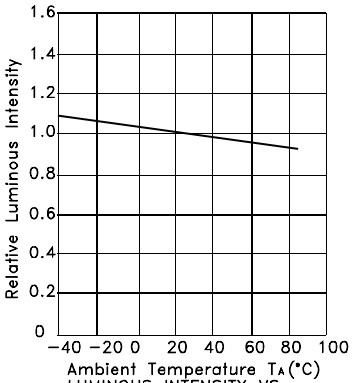
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



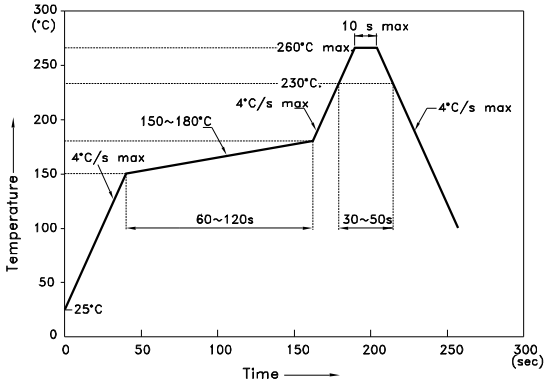
FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE

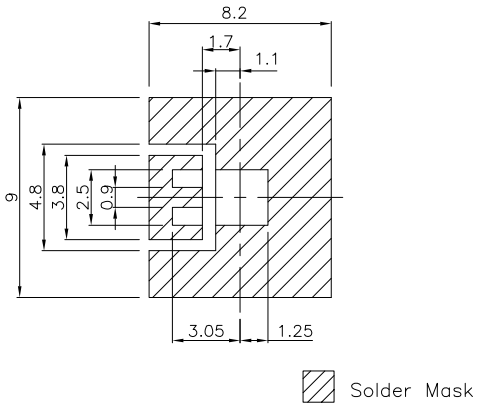
KA-3529SES-L1

Reflow Soldering Profile For Lead-free SMT Process.

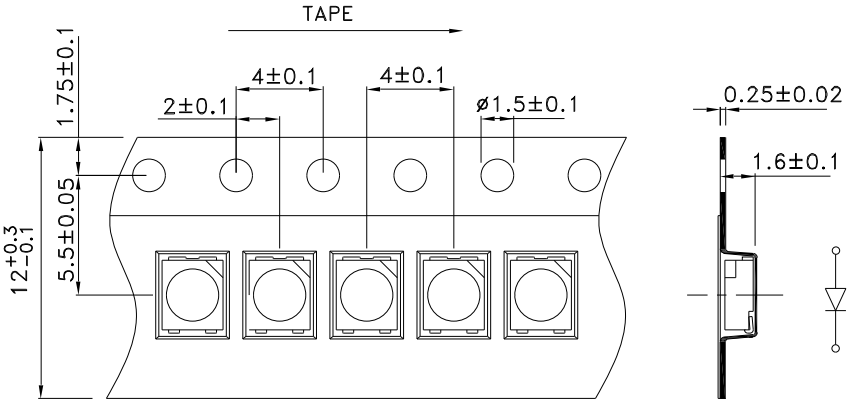


NOTES:
1. We recommend the reflow temperature 245°C(+/−5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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



Tape Specifications
(Units : mm)



PACKING & LABEL SPECIFICATIONS **KA-3529SES-L1**