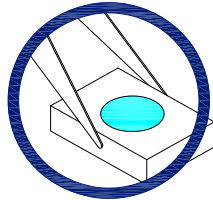


Handling Precautions

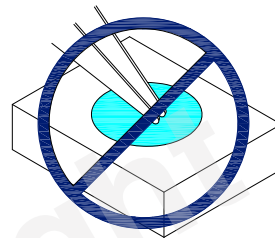
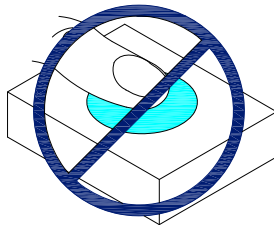
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

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.

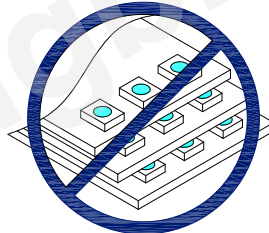
1. Handle the component along the side surfaces by using forceps or appropriate tools.



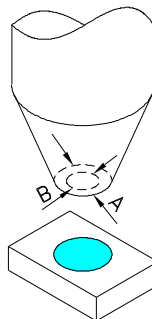
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



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_2S might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KAA-3528ESGS	High Efficiency Red (GaAsP/GaP)	Water Clear	12	30	120°
			*8	*15	
	Super Bright Green (GaP)		12	30	
			*12	*30	

Notes:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1 / 2 of the optical peak value.

2. Luminous intensity / luminous Flux: + / -15%.

* Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Super Bright Green	627 565		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	High Efficiency Red Super Bright Green	617 568		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	High Efficiency Red Super Bright Green	45 30		nm	I _F =20mA
C	Capacitance	High Efficiency Red Super Bright Green	15 15		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	High Efficiency Red Super Bright Green	2 2.2	2.5 2.5	V	I _F =20mA
I _R	Reverse Current	High Efficiency Red Super Bright Green		10 10	uA	V _R = 5V

Notes:

1. Wavelength: + / -1nm.

2. Forward Voltage: + / -0.1V.

3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

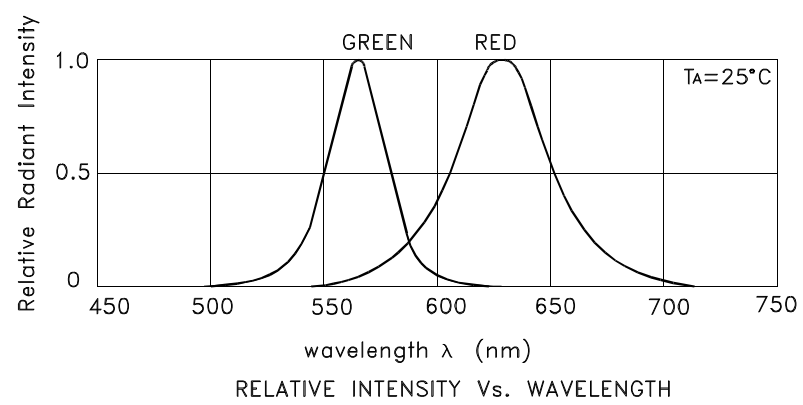
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

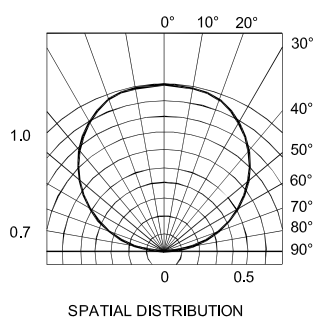
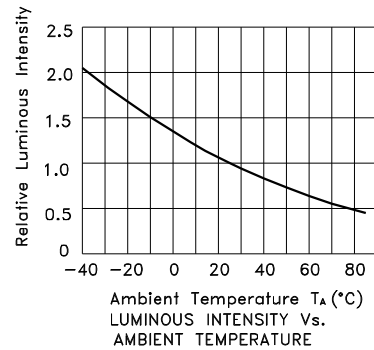
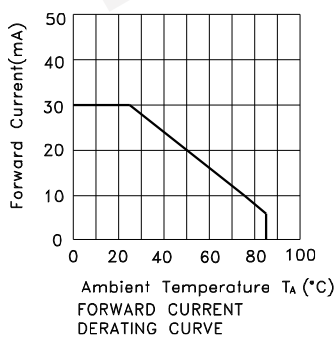
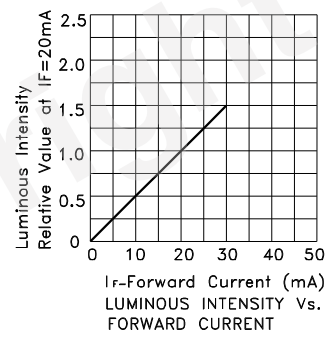
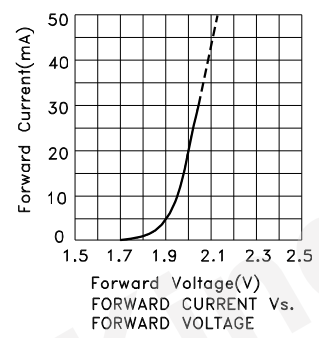
Parameter	High Efficiency Red	Super Bright Green	Units
Power dissipation	75	62.5	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	160	140	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

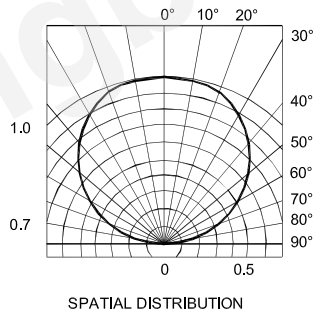
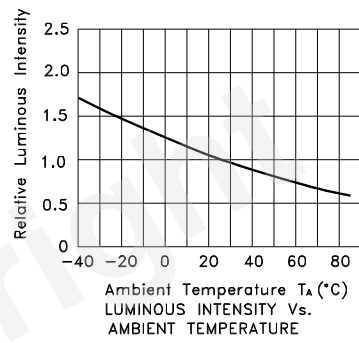
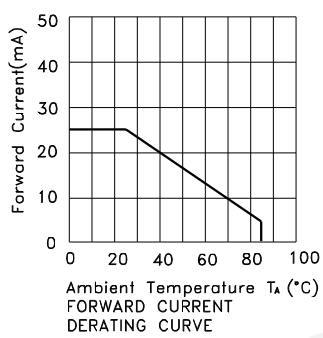
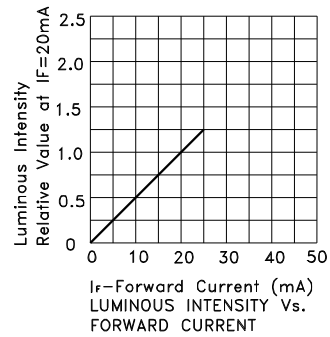
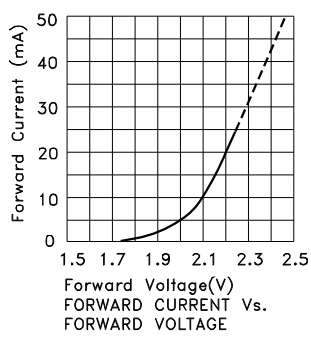
1. 1 / 10 Duty Cycle, 0.1ms Pulse Width.



KAA-3528ESGS
High Efficiency Red



Super Bright Green



KAA-3528ESGS

Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

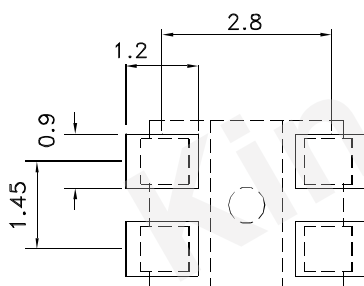
Reflow Soldering Profile For Lead-free SMT Process.



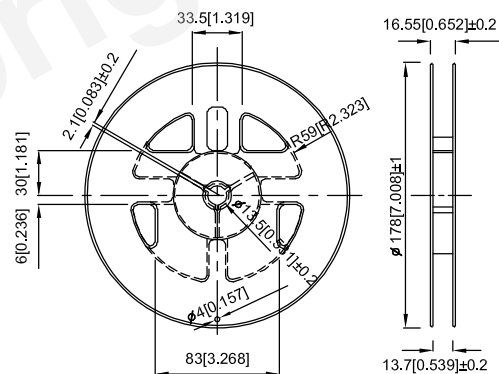
NOTES:

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.

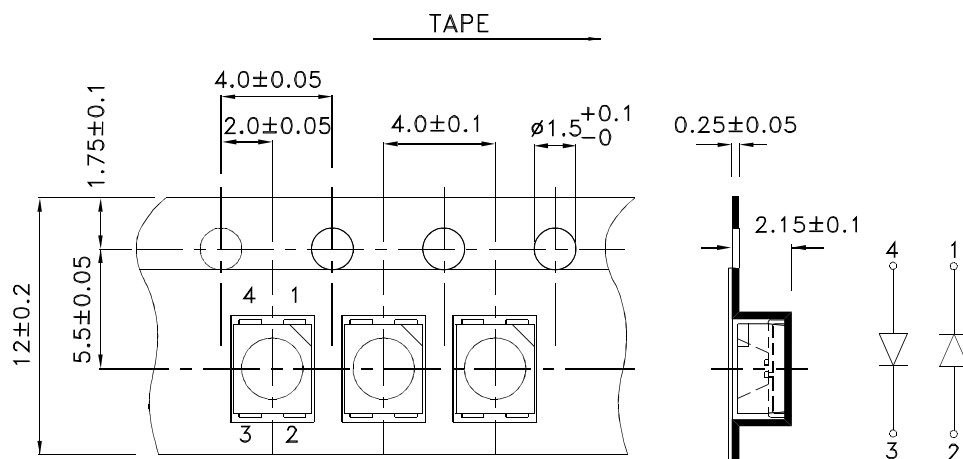
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

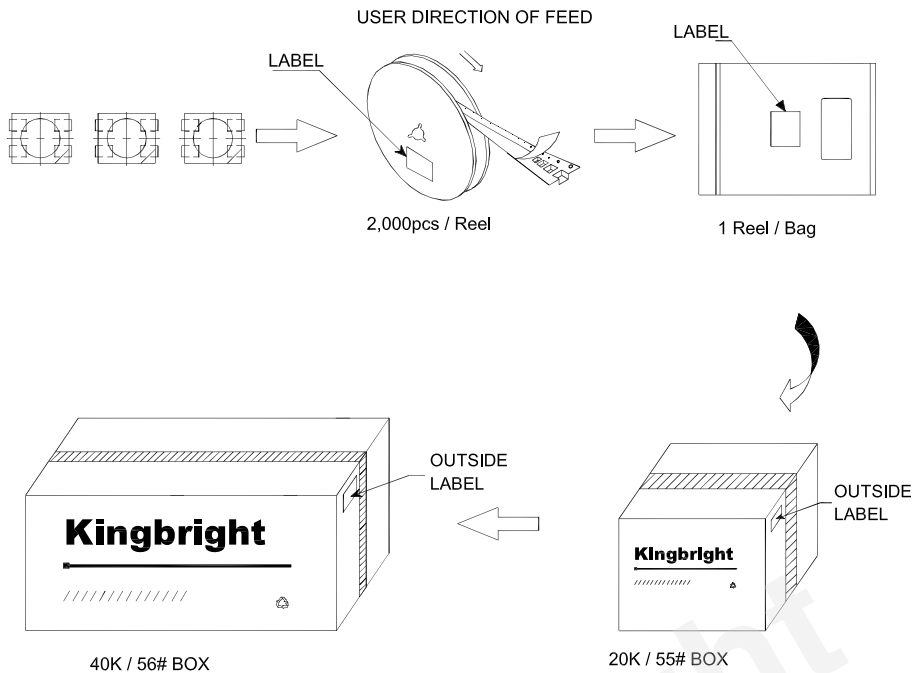



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KAA-3528ESGS



Kingbright		
P/NO: KAA-3528xxx		
QTY: 2,000 pcs	Q.C.	Q C
S/N: XXXX		xx xx xxxx
CODE: XXX		PASSED
LOT NO:		
		
RoHS Compliant		

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