



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- Single color.
- Suitable for all SMT assembly and solder process.
- Available on tape and reel.
- Ideal for backlighting.
- Package : 1500pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

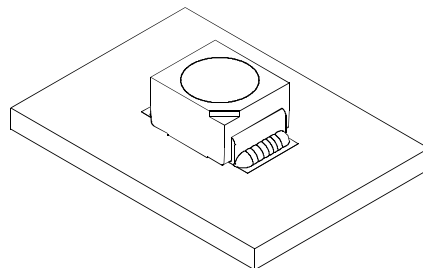
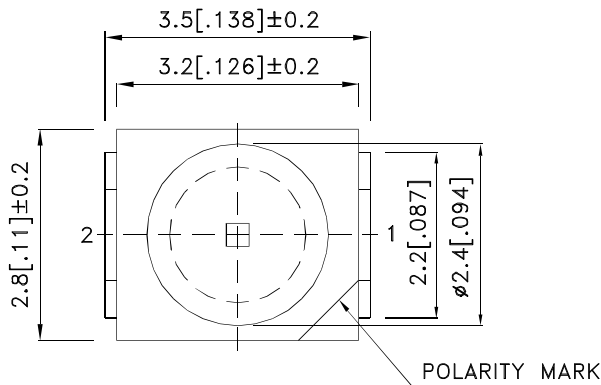
The source color devices are made with InGaN Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 (0.01") unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

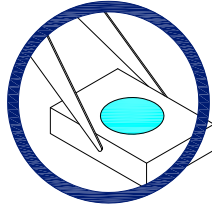


Handling Precautions

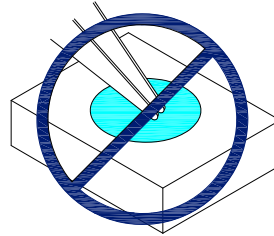
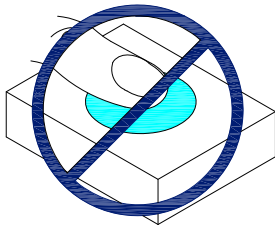
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

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.

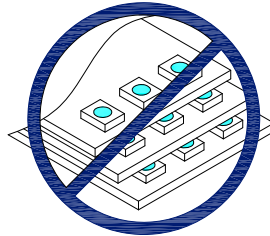
1. Handle the component along the side surfaces by using forceps or appropriate tools.



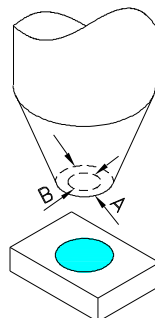
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



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] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
AA3528VRVFS/A	Violet (InGaN)	WATER CLEAR	110	250	120°

Notes:

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

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
V _F [1]	Forward Voltage	Violet	3.3	4.0	V	I _F =20mA
I _R	Reverse Current	Violet		50	uA	V _R = 5V
x [2]	Chromaticity Coordinates	Violet	0.19			
y [2]			0.05			
C	Capacitance	Violet	100		pF	V _F =0V;f=1MHz

Notes:

1. Forward Voltage: +/-0.1V.
2. Measurement tolerance of the chromaticity coordinates is ±0.01.

Absolute Maximum Ratings at TA=25°C

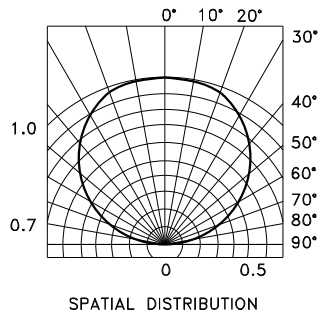
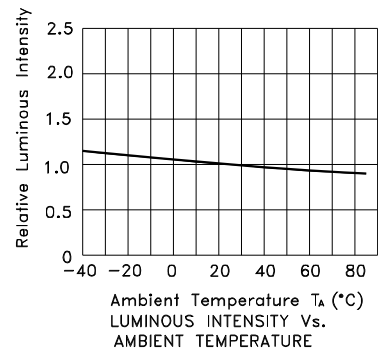
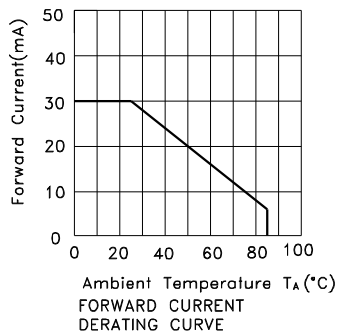
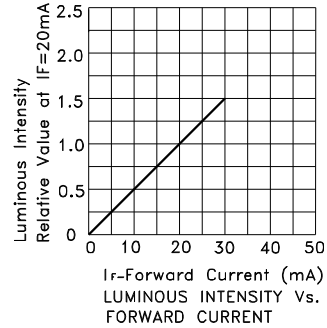
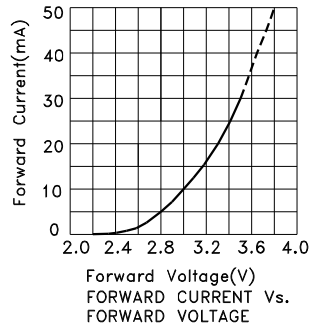
Parameter	Violet	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

Note:

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

Violet

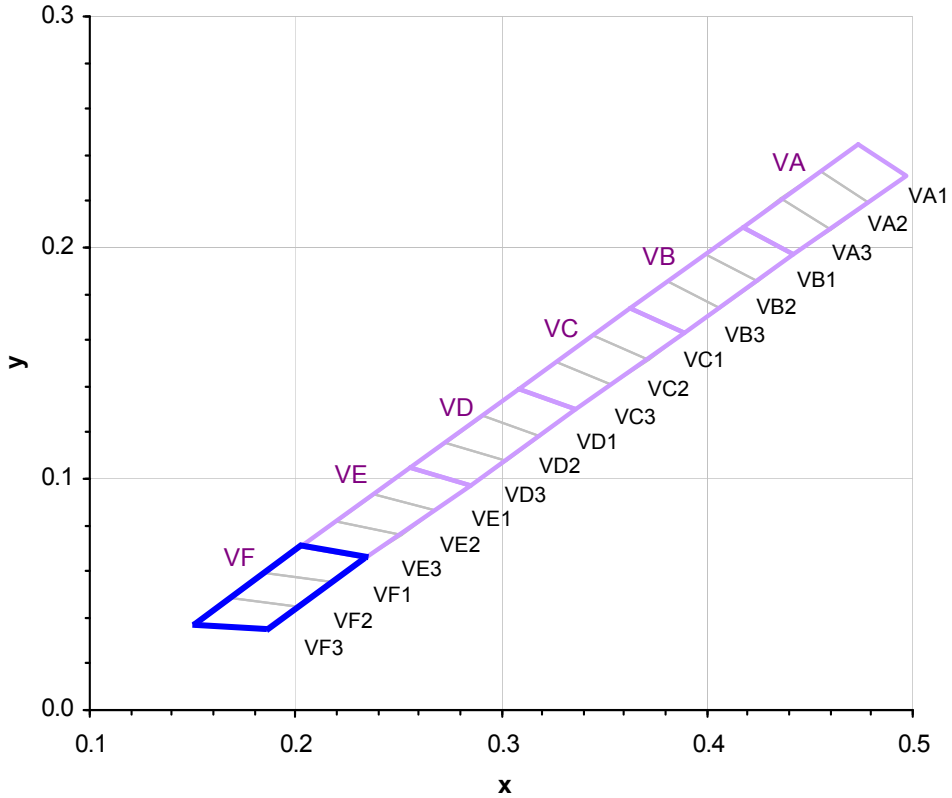
AA3528VRVFS/A



Violet

AA3528VRVFS/A

Violet CIE



	x	y		x	y		x	y
VA1	0.4735	0.2451	VC1	0.3629	0.1737	VE1	0.2556	0.1044
	0.4548	0.2330		0.3448	0.1620		0.2380	0.0931
	0.4783	0.2194		0.3713	0.1518		0.2682	0.0867
	0.4964	0.2309		0.3888	0.1629		0.2850	0.0973
VA2	0.4548	0.2330	VC2	0.3448	0.1620	VE2	0.2380	0.0931
	0.4363	0.2211		0.3267	0.1504		0.2205	0.0818
	0.4602	0.2080		0.3538	0.1408		0.2514	0.0761
	0.4783	0.2194		0.3713	0.1518		0.2682	0.0867
VA3	0.4363	0.2211	VC3	0.3267	0.1504	VE3	0.2205	0.0818
	0.4178	0.2091		0.3088	0.1388		0.2030	0.0705
	0.4422	0.1966		0.3364	0.1298		0.2347	0.0656
	0.4602	0.2080		0.3538	0.1408		0.2514	0.0761
VB1	0.4178	0.2091	VD1	0.3088	0.1388	VF1	0.2030	0.0705
	0.3994	0.1973		0.2910	0.1273		0.1857	0.0593
	0.4243	0.1853		0.3192	0.1189		0.2182	0.0551
	0.4422	0.1966		0.3364	0.1298		0.2347	0.0656
VB2	0.3994	0.1973	VD2	0.2910	0.1273	VF2	0.1857	0.0593
	0.3811	0.1855		0.2732	0.1158		0.1683	0.0481
	0.4065	0.1741		0.3021	0.1081		0.2018	0.0448
	0.4243	0.1853		0.3192	0.1189		0.2182	0.0551
VB3	0.3811	0.1855	VD3	0.2732	0.1158	VF3	0.1683	0.0481
	0.3629	0.1737		0.2556	0.1044		0.1510	0.0369
	0.3888	0.1629		0.2850	0.0973		0.1856	0.0345
	0.4065	0.1741		0.3021	0.1081		0.2018	0.0448

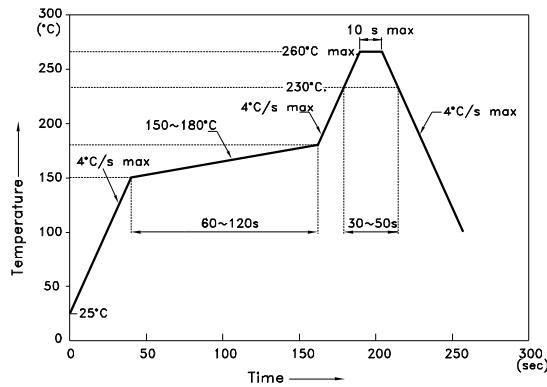
Notes:

Shipment may contain more than one chromaticity regions.
 Orders for single chromaticity region are generally not accepted.
 Measurement tolerance of the chromaticity coordinates is ± 0.01 .

AA3528VRVFS/A

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.

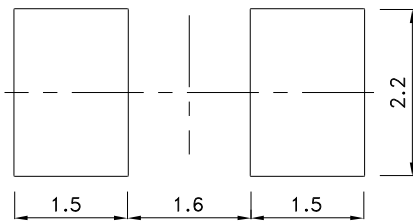
Reflow Soldering Profile For Lead-free SMT Process.



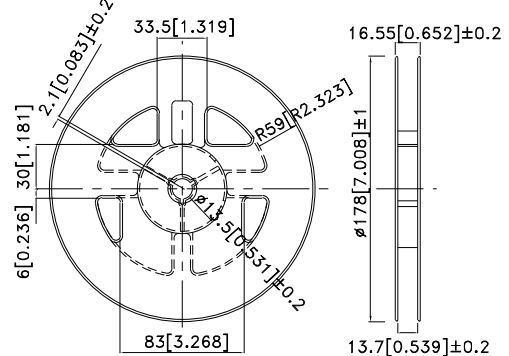
NOTES:

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.

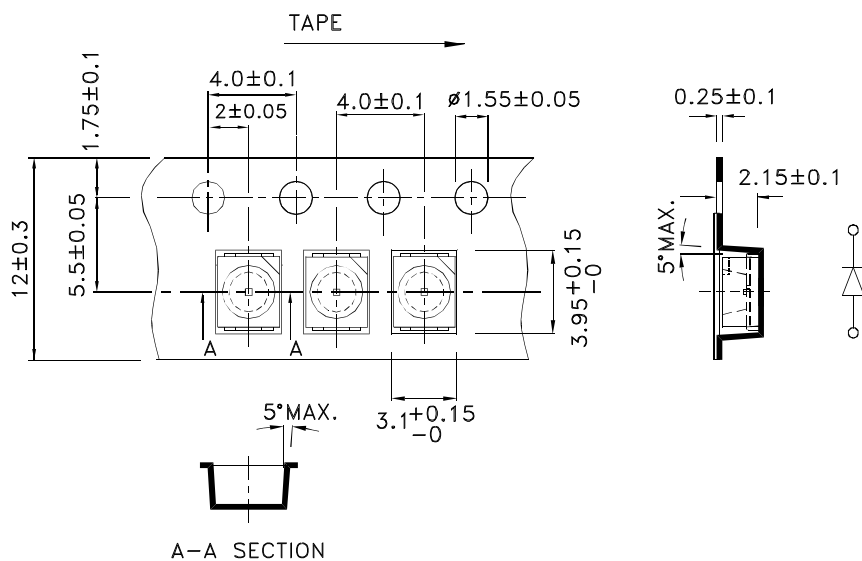
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



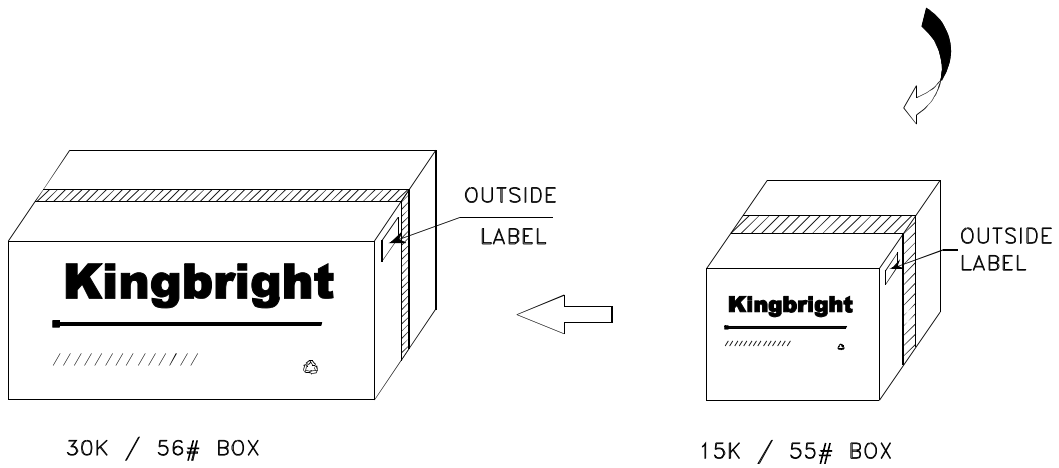
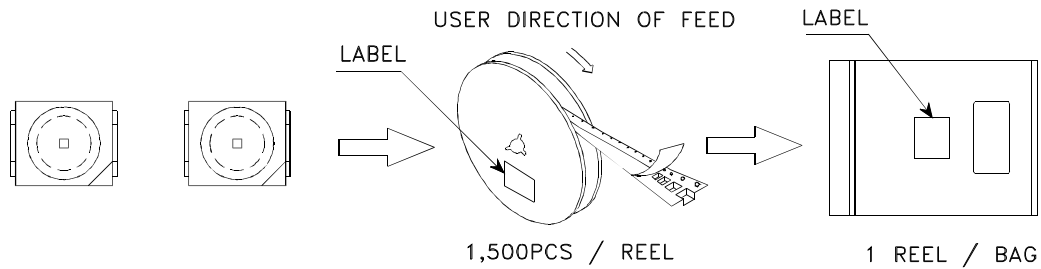
Tape Dimensions (Units : mm)




Kingbright

PACKING & LABEL SPECIFICATIONS

AA3528VRVFS/A



<h1>Kingbright</h1>	
P/NO: AA3528xxx	
QTY: 1,500 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

Mouser Electronics

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