



VAOL-S4RP4

0402 SMD Package Size

Red LED with Water Clear Lens



VAOL-S4 Series is a SMD LED with high intensity light output and a clear non-diffused lens

Application

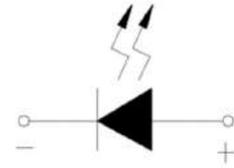
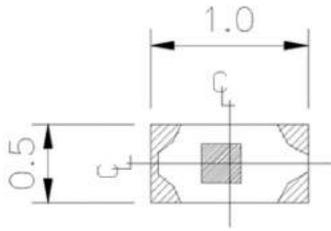
- Appliance
- Backlight & indicator
- Membrane switches
- Healthcare applications
- Wearable and portable devices
- Home and smart appliance
- Status indicator

Key features

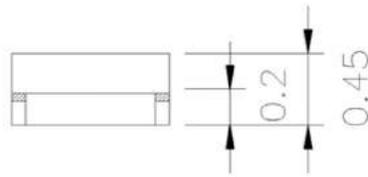
- Standard 0402 SMD package
- Emitting color: Red
- Fit automatic placement equipment
- Fit Compatible with infrared and vapor phase reflow solder process
- Pb-free
- For higher packing density
- For minature applications
- Water clear lens
- Chip material : Aluminium gallium indium phosphide (AlGaInP)
- RoHS compliant

Contact your Authorized VCC Distributor or local Sales Representative for more information or samples.

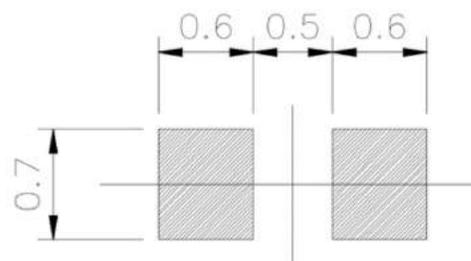
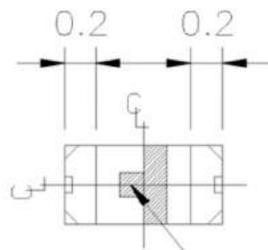
Product Dimensions



POLARITY



For Reflow Soldering



Note: The tolerance unless mentioned is $\pm 0.1\text{mm}$, Unit=mm

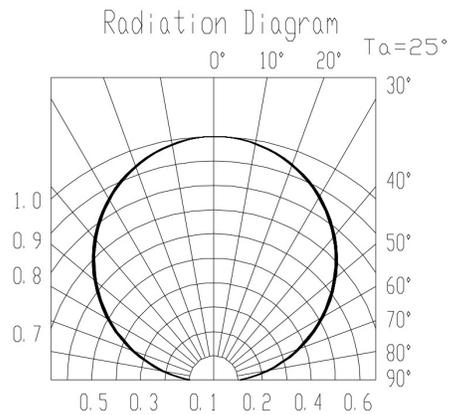
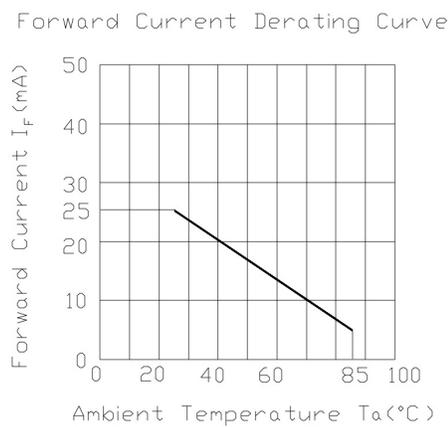
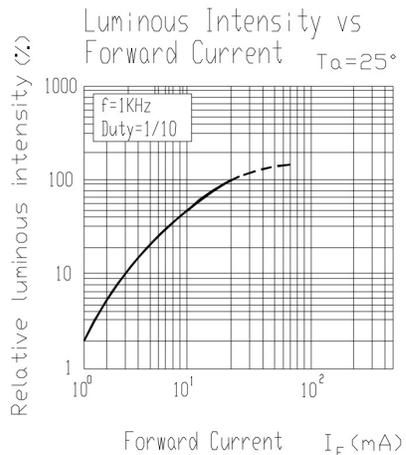
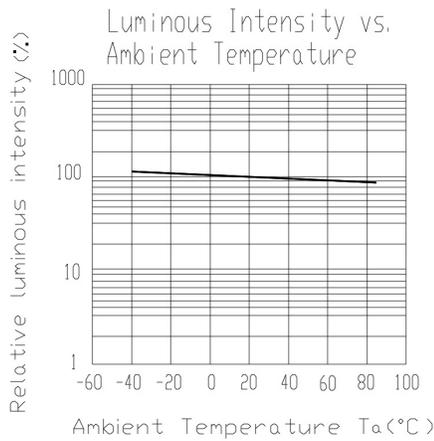
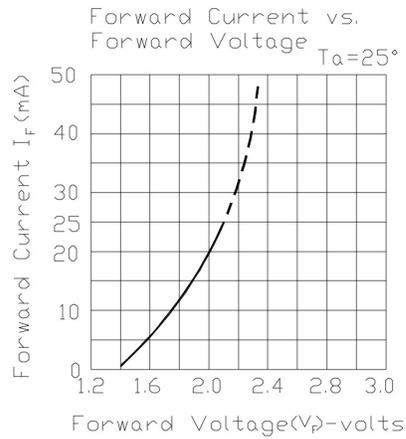
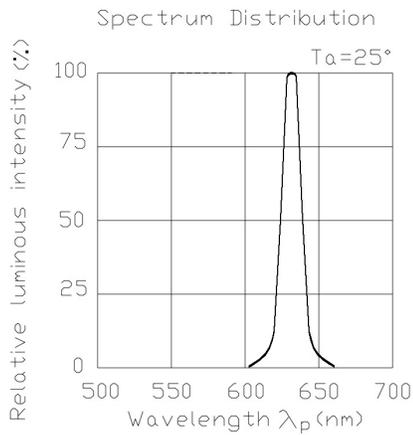
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	25	mA
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +90	°C
Soldering Temperature	T _{sol}	260 (for 5 second)	°C
Electrostatic Discharge (HBM)	ESD	2000	V
Power Dissipation	P _d	60	mW
Peak Forward Current (Duty 1/10 @1KHz)	I _{FP}	60	mA
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Chip Rank	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	A2	15	36	-----	mcd	I _F =20mA
		A3	25	40	-----		
		A4	36	50	-----		
		A5	48	70	-----		
		A6	58	89	-----		
Viewing Angle θ	2 1/2	-----	-----	120	-----	deg	
Peak Wavelength	λ_p	-----	-----	632	-----	nm	
Dominant Wavelength	λ_d	-----	-----	624	-----	nm	
Spectrum Radiation Bandwidth	$\Delta \lambda$	-----	-----	20	-----	nm	
Forward Voltage	V _F	-----	1.7	2.0	2.4	V	
Reverse Current	I _R	-----	-----	-----	10	μA	V _R =5V

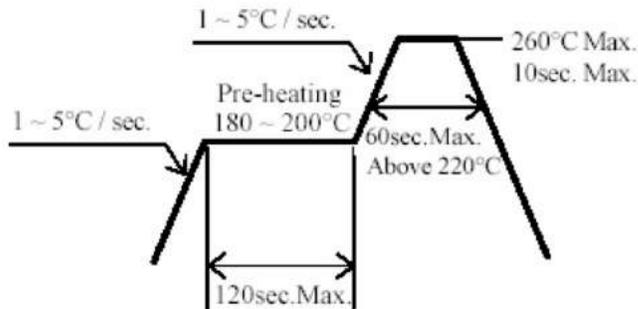
Typical Electro-Optical Characteristics Curves



Recommended Reflow Soldering Profile

Soldering Condition

1. Pb-free solder temperature profile



2. Reflow soldering should not be done more than two times.

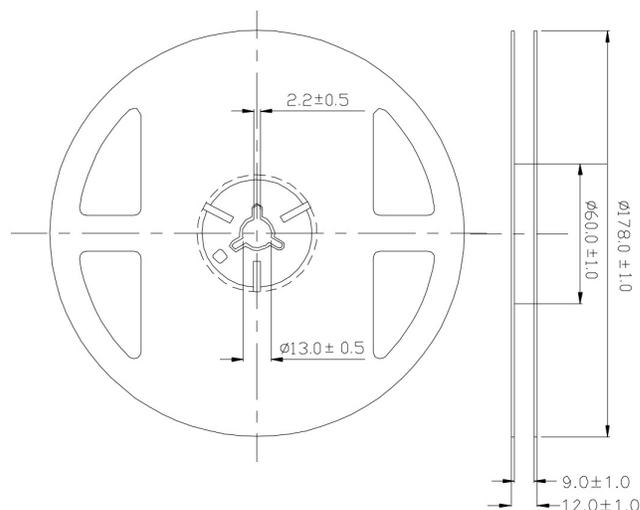
3 When soldering, do not put stress on the LEDs during heating.

4 After soldering, do not warp the circuit board.

Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

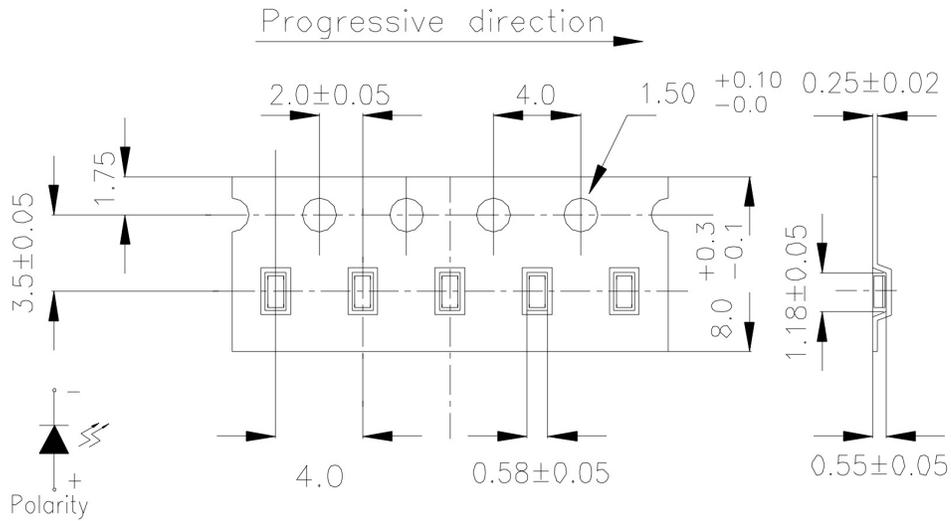
Tape and Reel Dimensions



Note: The tolerance unless mentioned is ± 0.1 mm, Unit=mm

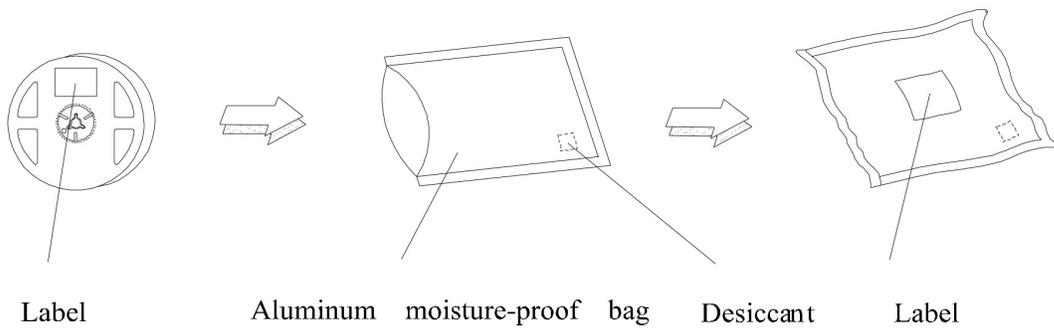
Tape and Reel Dimensions

Carrier Tape Dimensions: Loaded quantity 3000 PCS per reel



Note: The tolerance unless mentioned is $\pm 0.1\text{mm}$, Unit=mm

Moisture Resistant Packaging



Compliances and Approvals

