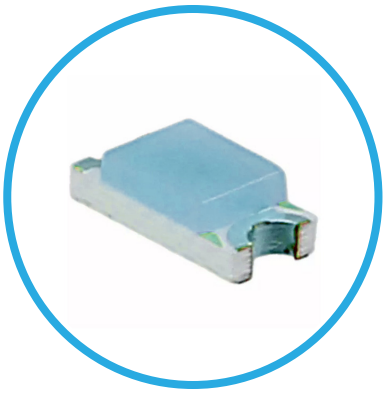
VAOL-S12SB4
1206 SMD Package Size
Blue LED with Water Clear Lens



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

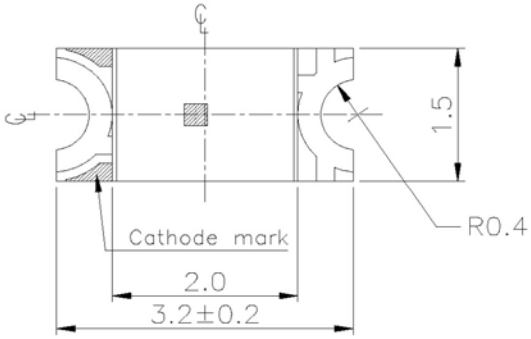
Application

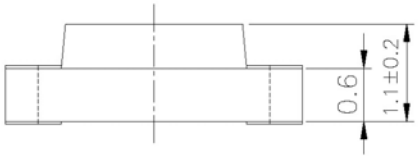
- Appliance
- Backlight & Indicator
- Healthcare Applications
- Wearable and Portable Devices
- Home and Smart Appliance
- Status Indicator

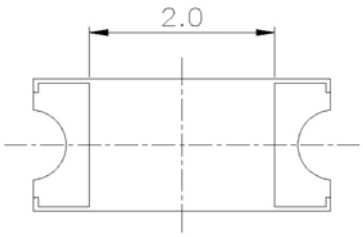
Key Features

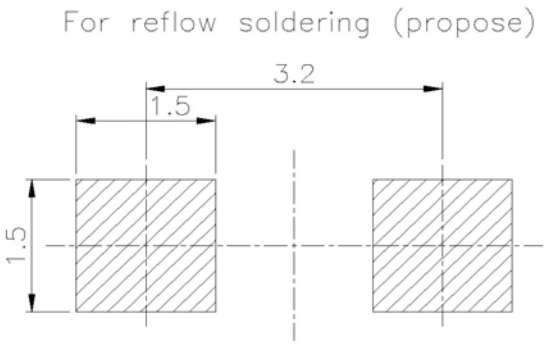
- Fit automatic placement equipment
- Fit Compatible with infrared and vapor phase reflow solder process
- For higher packing density
- For minature applications
- Water clear lens
- Chip material : InGaN
- Emitting color : Blue
- MSL2
- Pb-free
- RoHS compliant

Package Dimension









Notes:
1. All dimensions are in millimeters
2. Tolerance is ± 0.1mm
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

Product Specifications

Absolute Maximum Ratings at Ta= 25°C

Symbol	Parameter	Rating	Unit
VR	Reverse Voltage	5	V
IF	Forward Current	25	mA
Topr	Operating Temperature Range	-40~+85	°C
Tstg	Storage Temperature Range	-40~+90	°C
ESD	Electrostatic Discharge (HBM)	150	V
Pd	Power Dissipation	110	mW
IF	Peak Forward Current (Duty=0.1 , 1kHz)	100	mA
Tsol	Soldering Temperature	Reflow Soldering : 260 Hand Soldering: 350	˚C for 10sec ˚C for 3sec

Electrical / Optical Characteristics and Curves at Ta= 25°C

Symbol	Parameter	Min.	Typ.	Max.	Unit	Condition
IV	Luminous Intensity	28.5	-	72	mcd	IF=20mA
2θ1/2	Viewing Angle	-	130	-	deg	
λp	Peak Wavelength	-	468	-	nm	
λd	Dominant Wavelength	464.5	-	476.5	nm	
Δλ	Spectrum Radiation Bandwidth	-	25	-	nm	
VF	Forward Voltage	-	3.5	4.0	V	
IR	Reverse Current	-	-	50	μA	VR=5V

Bin Range Of Dom. Wavelength

Group	Bin	Min	Max	Unit	Condition
A	A9	464.5	467.5	nm	IF=20mA
	A10	467.5	470.5		
	A11	470.5	473.5		
	A12	473.5	476.5		

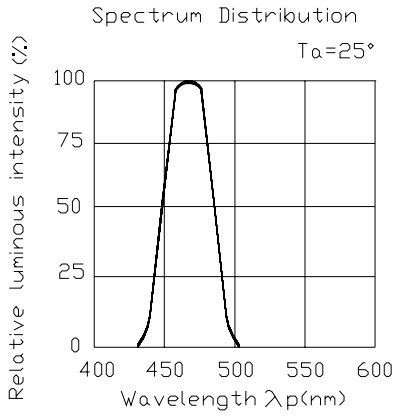
Bin Range Of Luminous Intensity

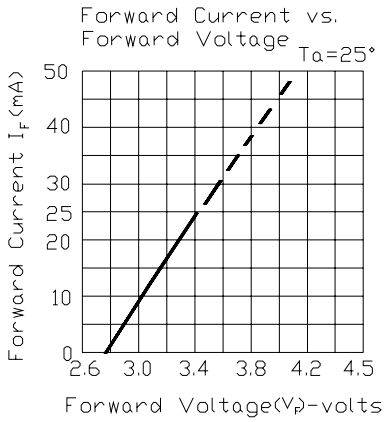
Bin	Min	Max	Unit	Condition
N1	28.5	36.0	mcd	IF=20mA
N2	36.0	45.0		
P1	45.0	57.0		
P2	57.0	72.0		

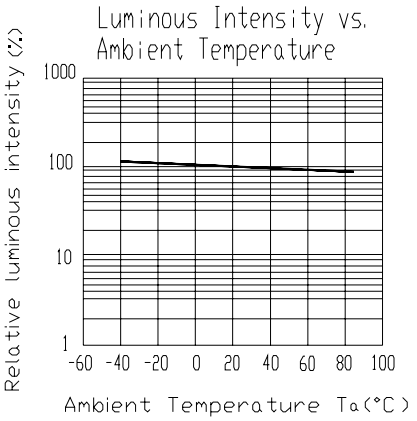
Note:
1. Tolerance of Luminous Intensity ±10%
2. Tolerance of Dominant Wavelength ± 1nm
3. Tolerance of Forward Voltage ±0.1 V
4. Specific binning requirements- please contact VCC

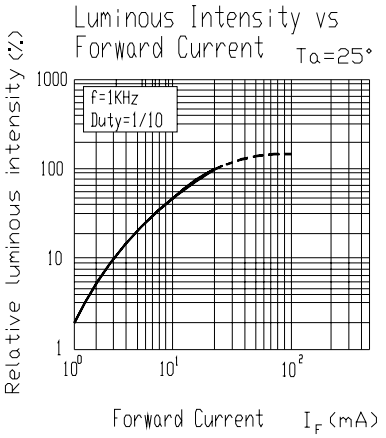
Product Specifications

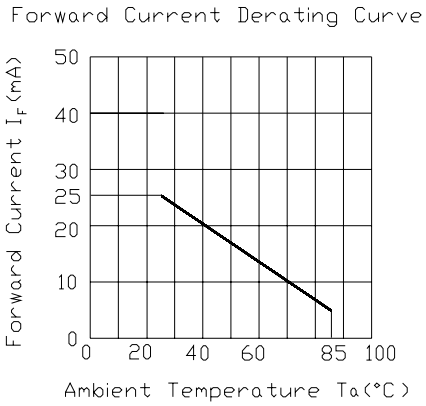
Typical Electro-optical Characteristic

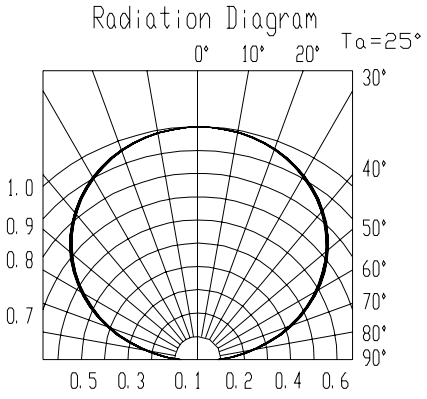






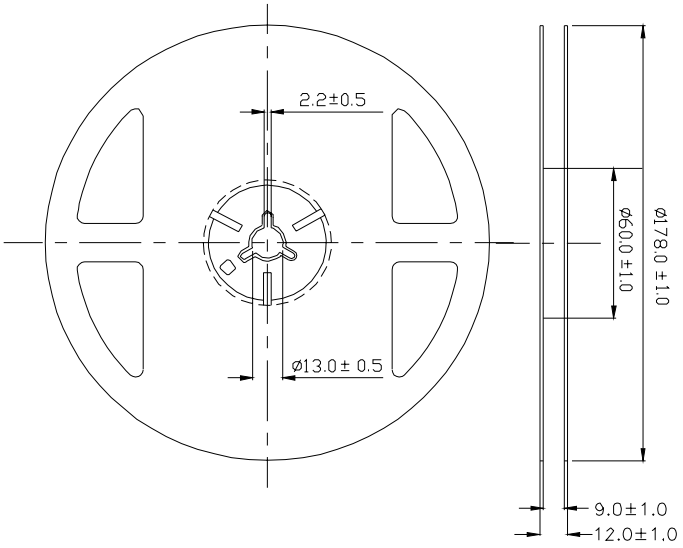




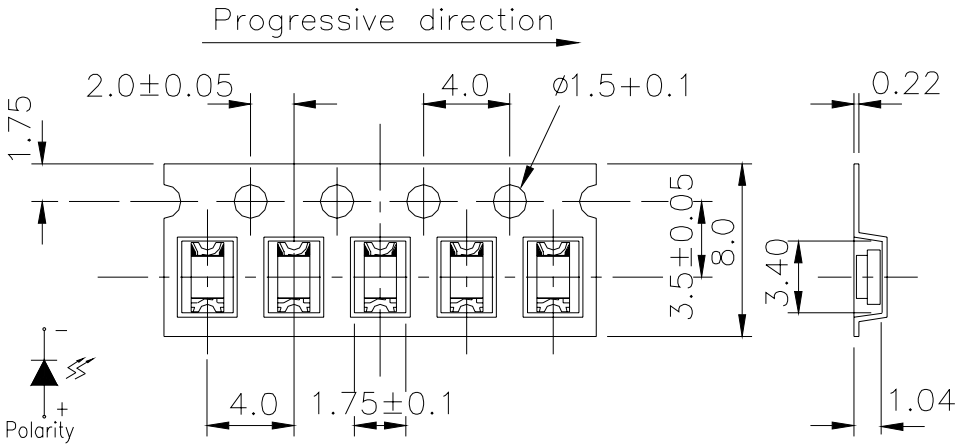


Compliances and Approvals

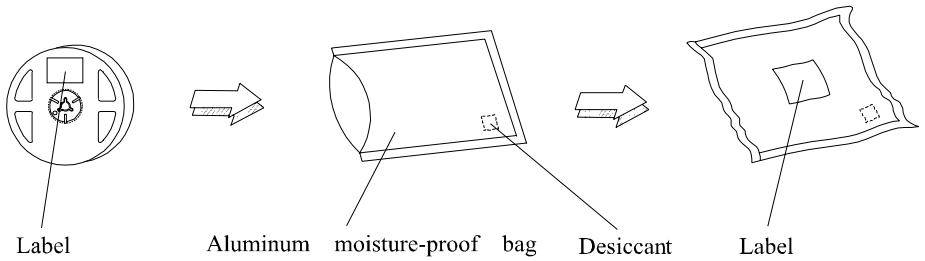
Tape and Reel Dimensions



Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



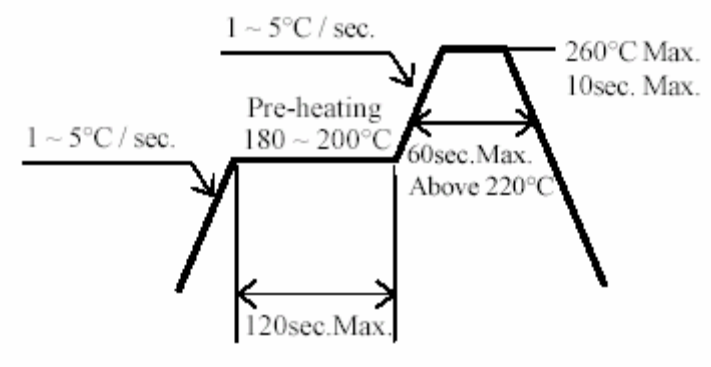
Moisture Resistant Packaging



Notes:
1. All dimensions are in millimeters
2. Tolerance is ± 0.1mm

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.

Compliances and Approvals