



VAOL-S12WR4

1206 Package Size

SMD LED WHITE



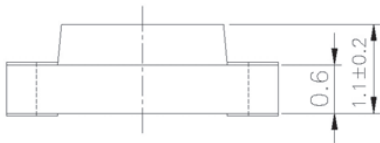
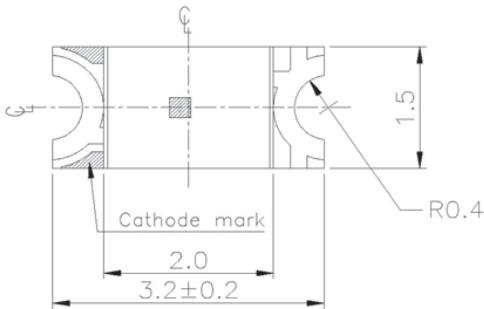
Features

- Fit automatic placement equipment
- Fit compatible with infrared and vapor phase reflow solder process
- Pb-free
- RoHS compliant

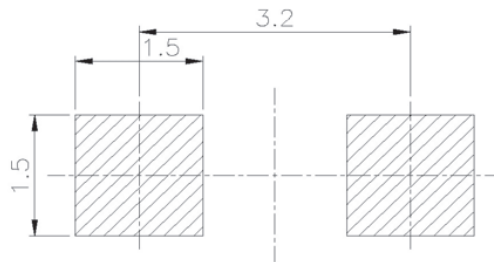
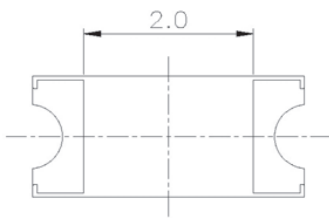
Descriptions

- For higher packing density
- For miniature applications
- Yellow Diffusion Lens
- Chip material: InGaN
- Emitting color: white

Package Outline Dimensions



For reflow soldering (propose)



Note: The tolerances 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
Electrostatic Discharge(HBM)	ESD	150	V
Power Dissipation	P _d	110	mW
Peak Forward Current (Duty 1/10 @1KHz)	I _{FP}	100	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	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	45	72	112	mcd	I _F =5mA
Viewing Angle	2θ 1/2	-----	140	-----	deg	
Forward Voltage	V _F	2.70	2.90	3.15	V	
Reverse Current	I _R	-----	-----	50	μA	V _R =5V

Bin Range Of Luminous Intensity & Forward Voltage

Symbol	Bin Code	Min.	Max.	Unit	Condition
I _v	P	45.0	72.0	mcd	I _F =5mA
	Q	72.0	112		
V _F	15	2.70	2.85	V	
	16	2.85	3.00		
	17	3.00	3.15		

Notes:

1. Tolerance of Luminous Intensity ±10%
2. Tolerance of Forward Voltage ±0.1V

Chromaticity Coordinates Specifications for BIN Grading

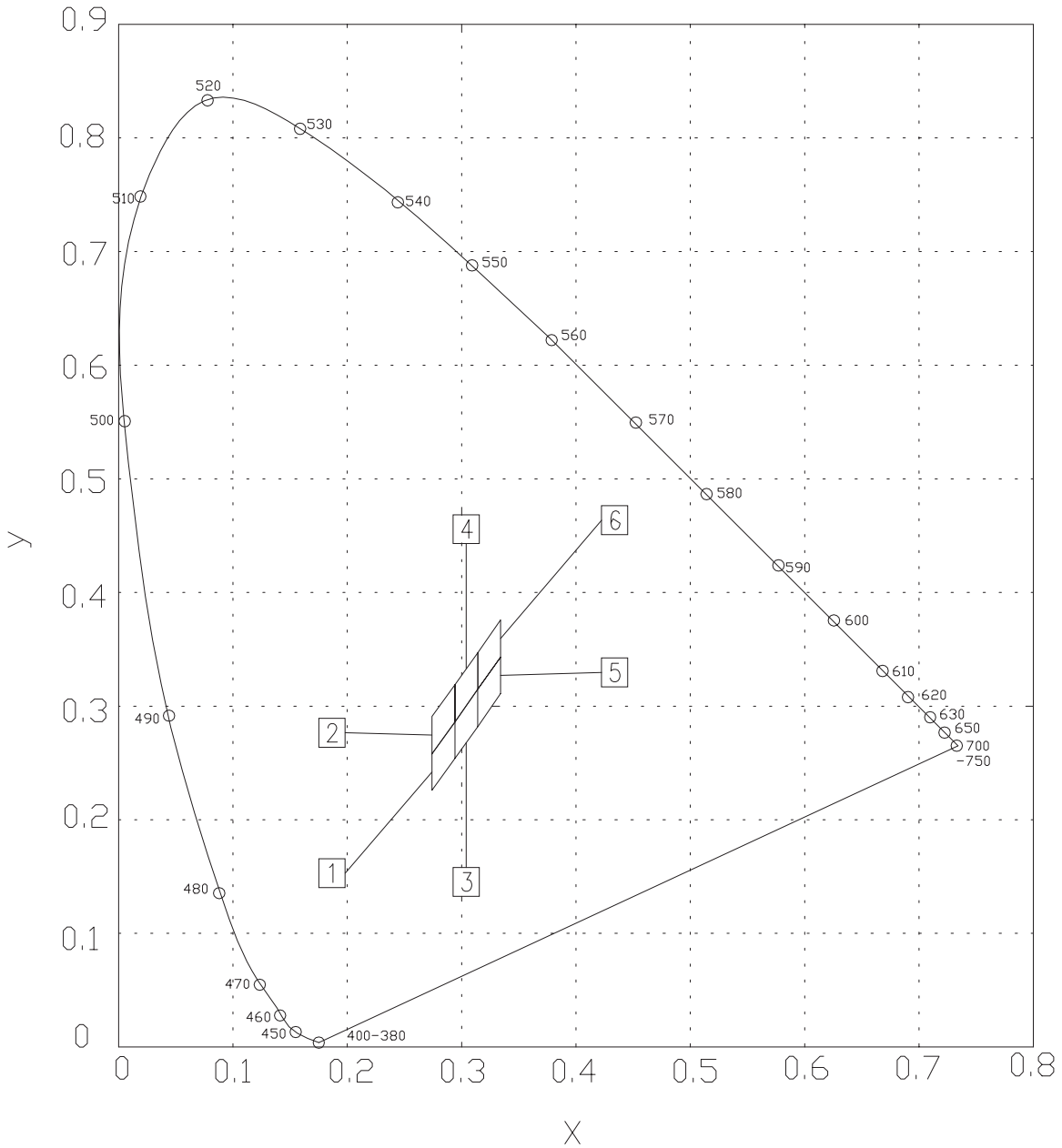
I_F = 5mA

Groups	Bin Code	CIE_x	CIE_y
A	1	0.274	0.226
		0.274	0.258
		0.294	0.286
		0.294	0.254
	2	0.274	0.258
		0.274	0.291
		0.294	0.319
		0.294	0.286
	3	0.294	0.254
		0.294	0.286
		0.314	0.315
		0.314	0.282
	4	0.294	0.286
		0.294	0.319
		0.314	0.347
		0.314	0.315
	5	0.314	0.282
		0.314	0.315
		0.334	0.343
		0.334	0.311
	6	0.314	0.315
		0.314	0.347
		0.334	0.376
		0.334	0.343

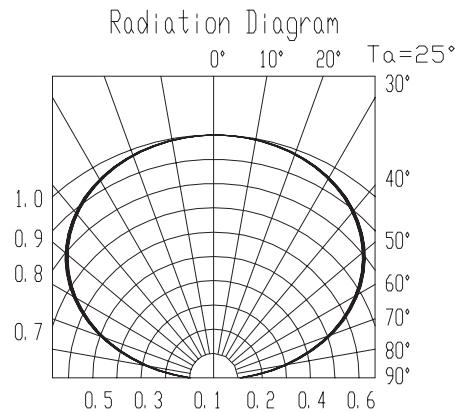
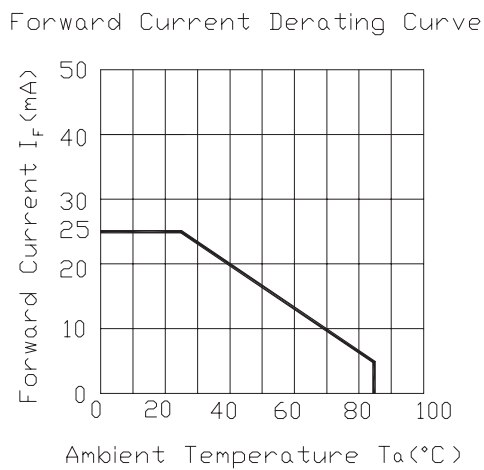
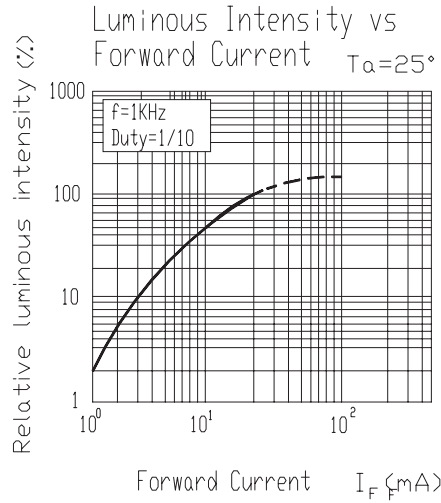
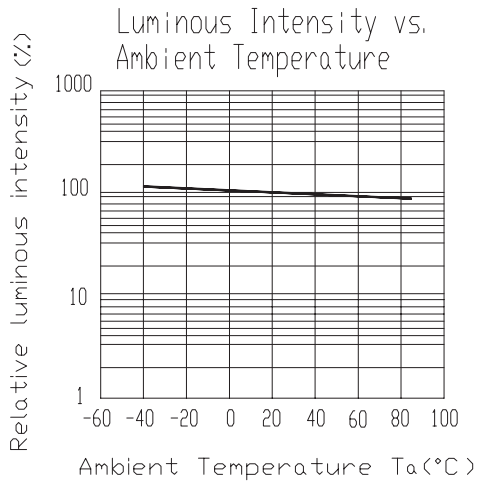
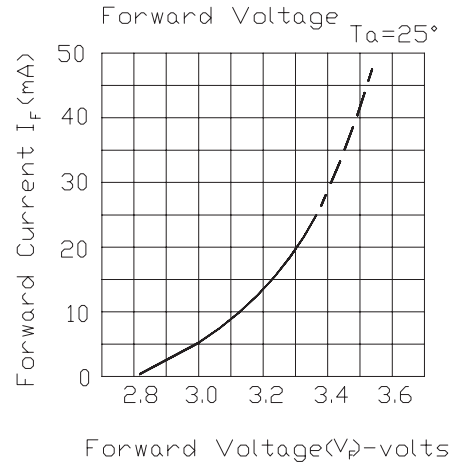
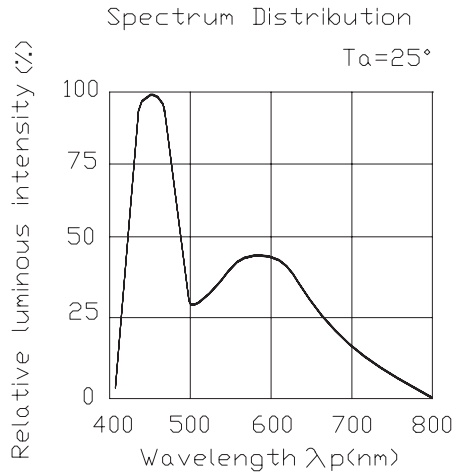
Notes:

- 1.The C.I.E. 1931 chromaticity diagram (Tolerance ± 0.01).
- 2.The products are sensitive to static electricity and care must be fully taken when handling products.

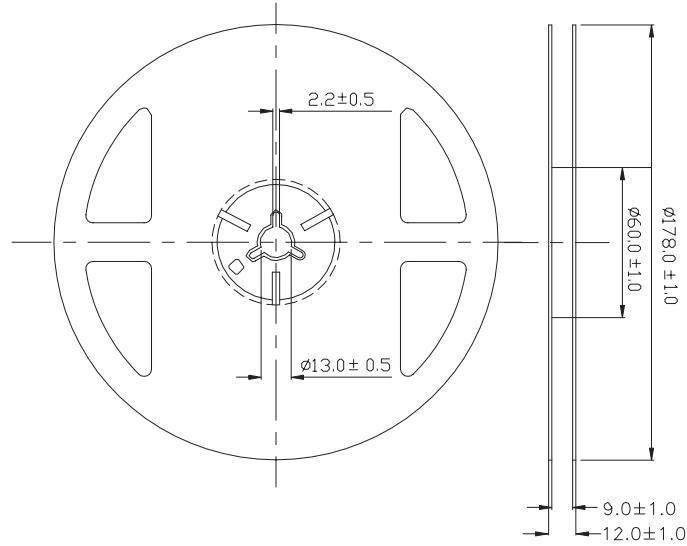
CIE Chromaticity Diagram



Typical Elctro-Optical Characteristics Curves

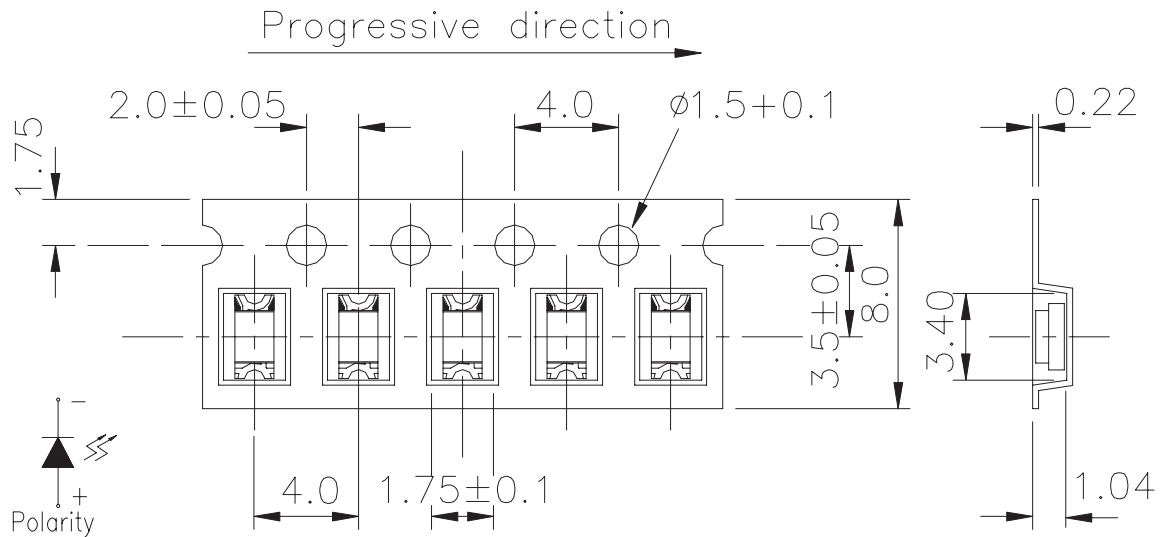


Reel Dimensions



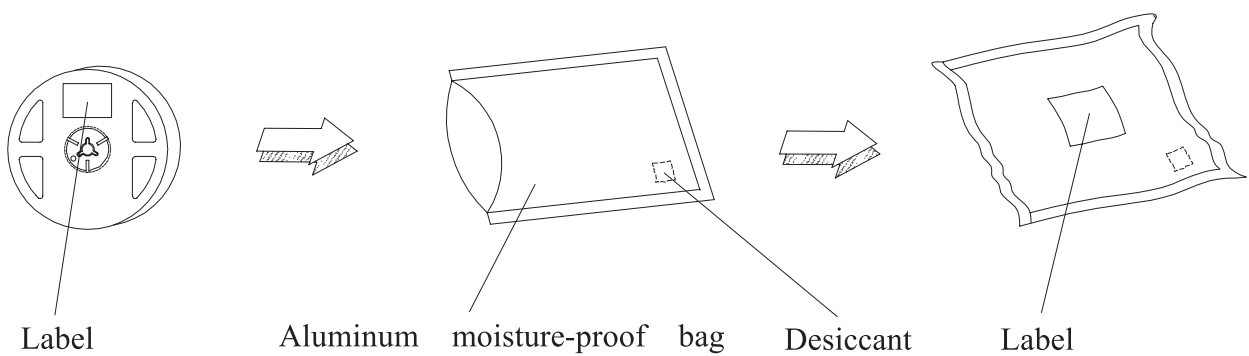
Note: The tolerances unless mentioned is ± 0.1 mm ,Unit = mm

Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



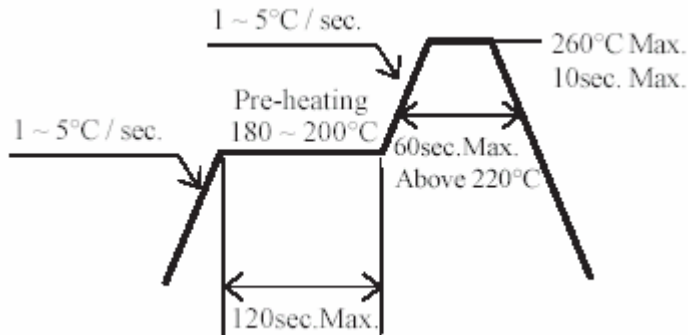
Note: The tolerances unless mentioned is ± 0.1 mm ,Unit = mm

Moisture Resistant Packaging



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.

Rated Lumen Maintenance Life

(L50) at 10,000 hour lifetime