Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com
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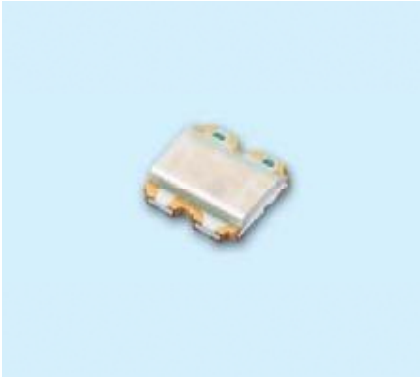
VCC | OPTOELECTRONICS
lighting:theway

Full Color PCB Type SMD LED
VAOL-S19337R6GHBH

Features

- Package in 8mm tape on a 7″ diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Multi-color type.
- Pb-free.
- RoHS compliant version.



Descriptions

- The SMD LED is much smaller than lead frame type components, thus enable smaller board size, higher packing density and reduced storage space and finally smaller equipment to be obtained.
- Light weight makes them ideal for miniature applications.

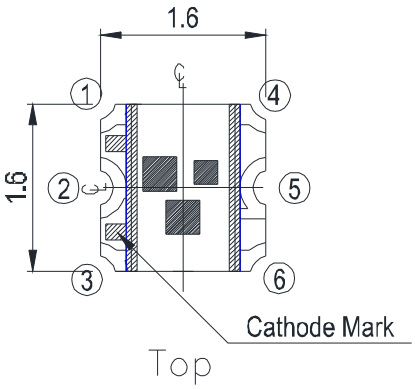
Applications

- Automotive.
- Portable equipment.
- General use.

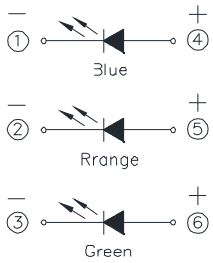
Device Selection Guide

Chip			Lens Color
Type	**Material**	**Emitted Color**	
R	AlInGaN	Brilliant Red	Water Clear
G	InGaN	Brilliant Green	
B	InGaN	Blue	

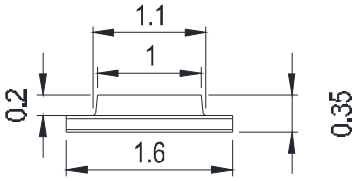
Package Outline Dimensions



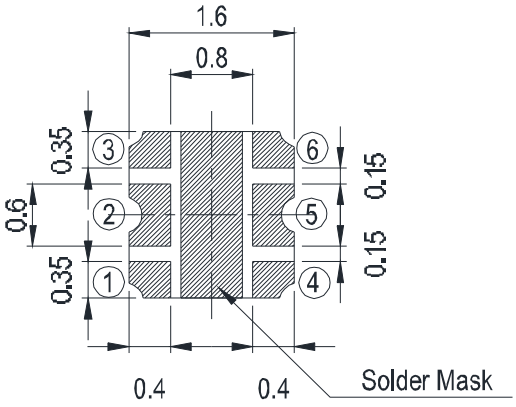
Top



Polarity

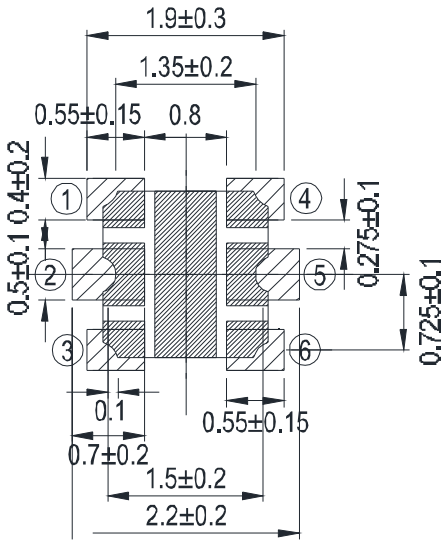


Side



Bottom

Recommend soldering pad



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

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	R6:25 GH:25 BH:25	mA
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	260 (for 5 seconds)	℃
Electrostatic Discharge	ESD	R6:2000 GH:150 BII:150	V
Power Dissipation	Pd	R6:60 GH:110 BH:110	mW
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	R6:60 GH:100 BH:100	mA

Specific binning requirements- please contact our home office

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	R6	72	100	-----	mcd	IF=20mA
		GH	112	180			
		BH	28.5	50			
Viewing Angle	2θ 1/2		-----	120	-----	deg	
Peak Wavelength	λp	R6	-----	632	-----	nm	
		GH		518			
		BH		468			
Dominant Wavelength	λd	R6	-----	624	-----	nm	
		GH		525			
		BH		470			
Spectrum Radiation Bandwidth	△λ	R6	-----	20	-----	nm	
		GH		35			
		BH		35			
Forward Voltage	VF	R6	-----	2.0	2.4	V	
		GH		3.3	3.9		
		BH		3.3	3.9		
Reverse Current	IR	R6	-----	-----	10	μA	VR=5V
		GH			50		
		BH			50		

Notes:

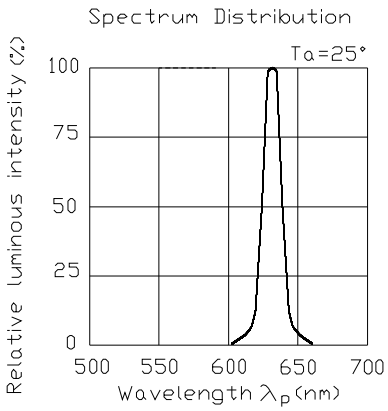
1.Tolerance of Luminous Intensity ±10%

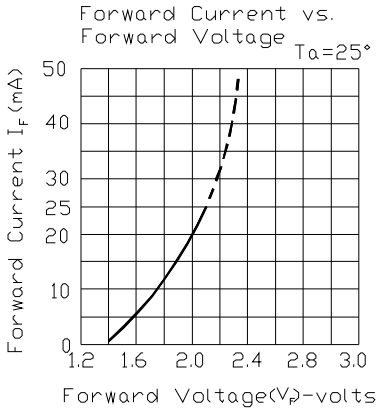
2.Tolerance of Dominant Wavelength ±1nm

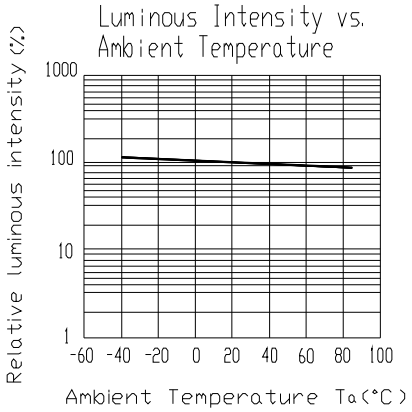
3.Tolerance of Forward Voltage ±0.1V

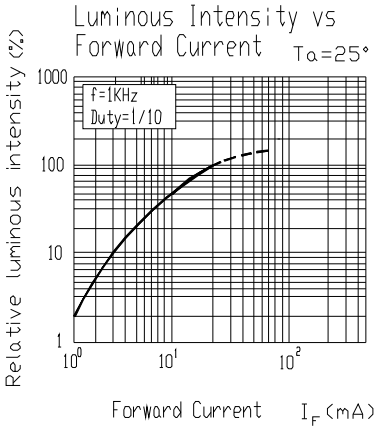
Typical Electro-Optical Characteristics Curves

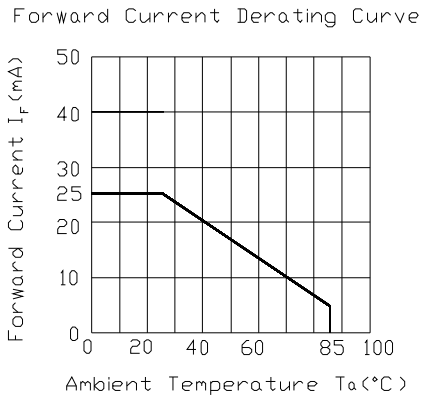
R6

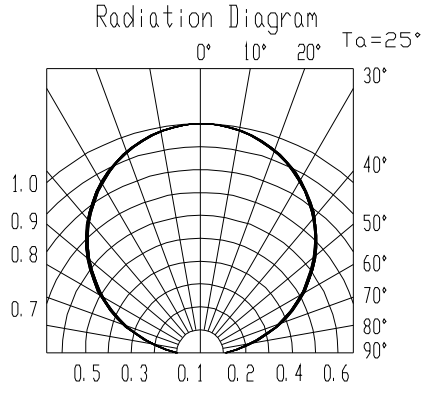






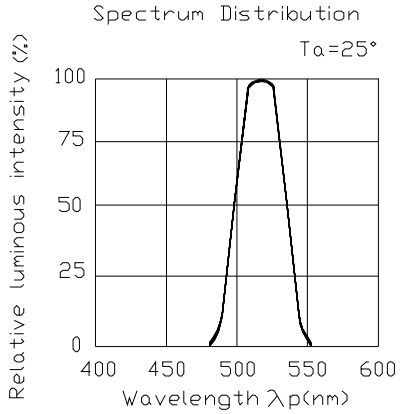


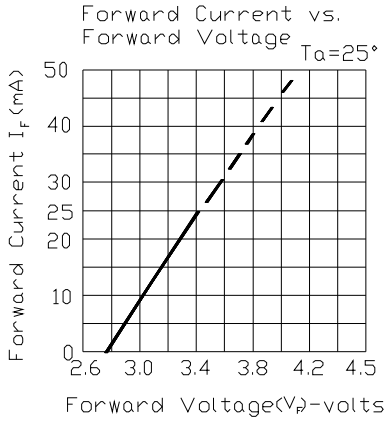


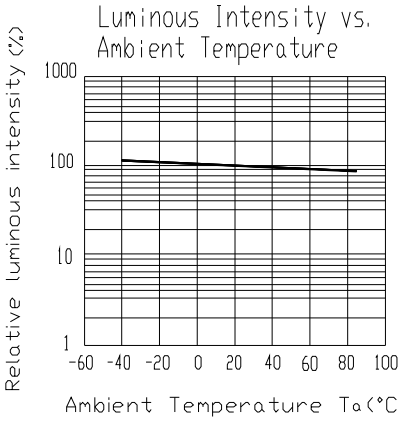


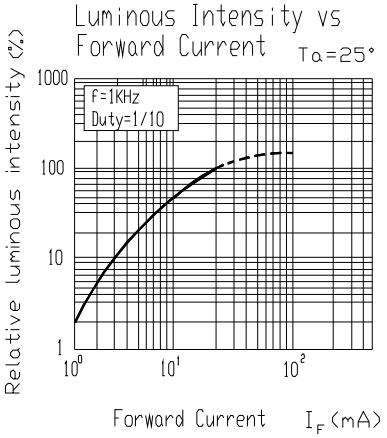
Typical Electro-Optical Characteristics Curves

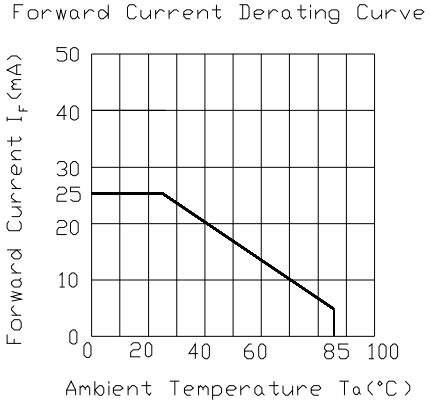
GH

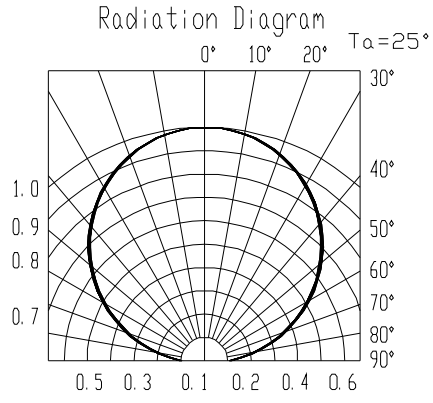






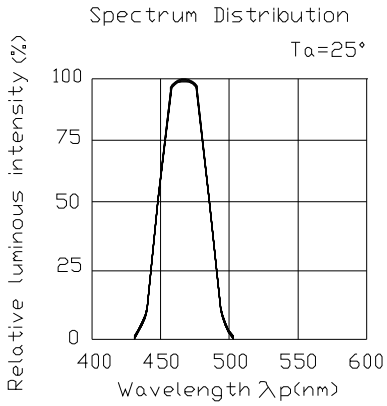


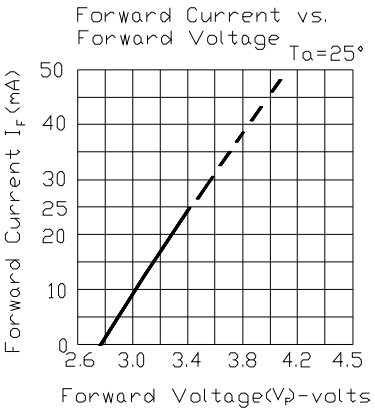


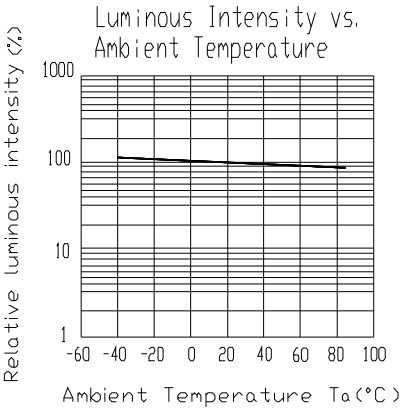


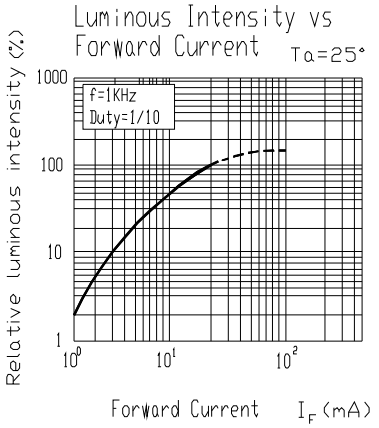
Typical Electro-Optical Characteristics Curves

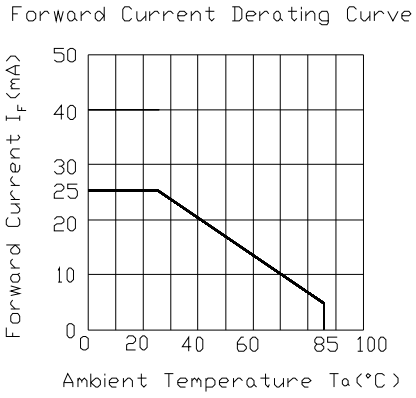
BH

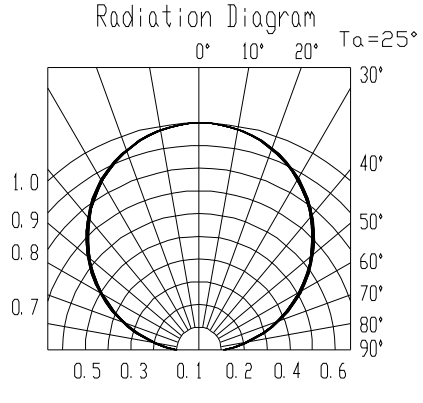




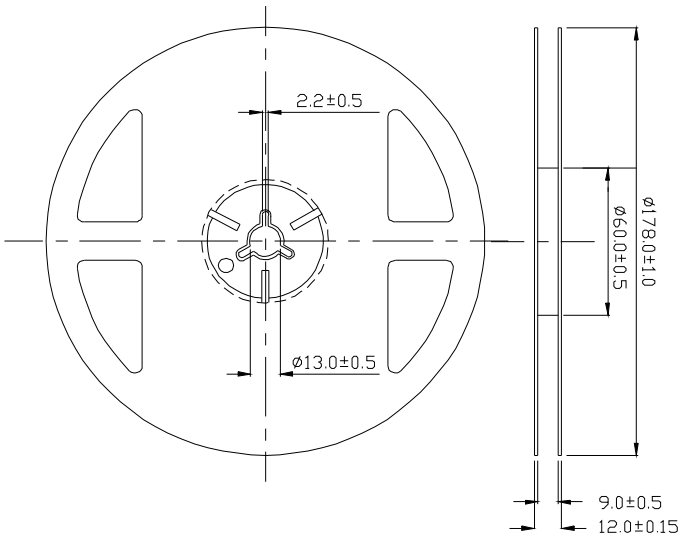






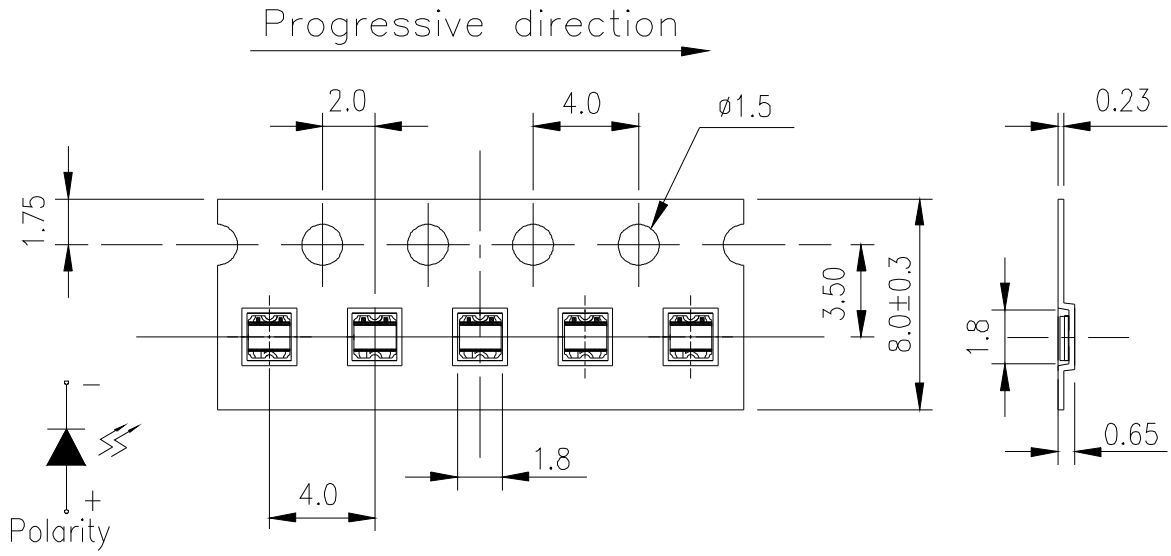


Reel Dimensions



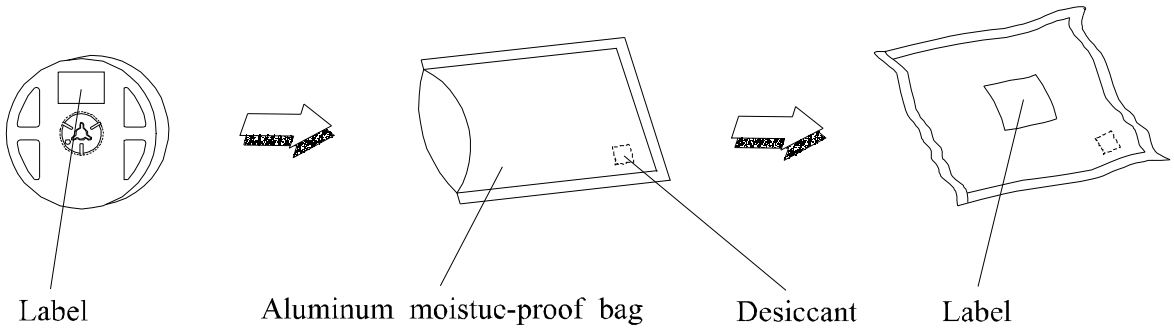
Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



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

Moisture Resistant Packaging



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.
Confidence level：90%
LTPD：10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260℃±5℃ 5sec.	6 Min.	22 PCS.	0/1
2	Temperature Cycle	H : +100℃ 15min ∫ 5 min L : -40℃ 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100℃	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40℃	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	I_F = 20 mA	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85℃/ 85% RH	1000 Hrs.	22 PCS.	0/1

Precautions For Use

1. Customer must apply resistors for protection , otherwise slight a voltage shift will cause a big current change.

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30℃ or less and 90%RH or less.

2.3 The LEDs should be used within a year.

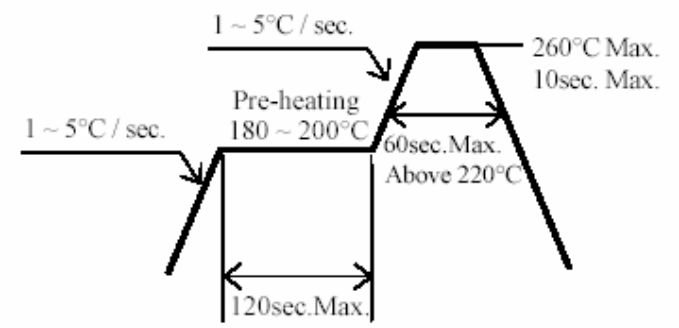
2.4 After opening the package, the LEDs should be kept at 30℃ or less and 70%RH or less.

2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
Baking treatment : 60±5℃ for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.
3.3 When soldering, do not put stress on the LEDs during heating.
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280℃ 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.