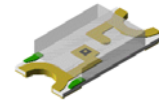


1206 SMD LED 0.50mm Height

VS 5WH9

Description

The major breakthrough in VS 5WH9 White color emitted is package in dimension L x W x H, 1.0 * 0.5 * 0.5 mm. The dice used in this series is InGaN material. The advantages of InGaN are low power consumption and obtaining high luminous intensity under low current driving condition. The wavelengths and luminous Intensities of this series are grouped under 20mA for uniformity. These LED are suitable for multiple usages in series connection applications.



Applications

- Cellular phone display
- Backlight keypads
- Industrial control systems signal indicator
- Automotive features



Electronic Optical Characteristics (at 20mA):

Part Number	Emitted Color	C.C		Lens Color	Iv(mcd)		View Angle	VF(V)	
		X	Y		Min.	Typ.		Typ.	Max.
VS 5WH9	White	0.29	0.30	Yellow diff.	140	240	150	3.0	3.3

Absolute Maximum Ratings (at Ta=25°C)

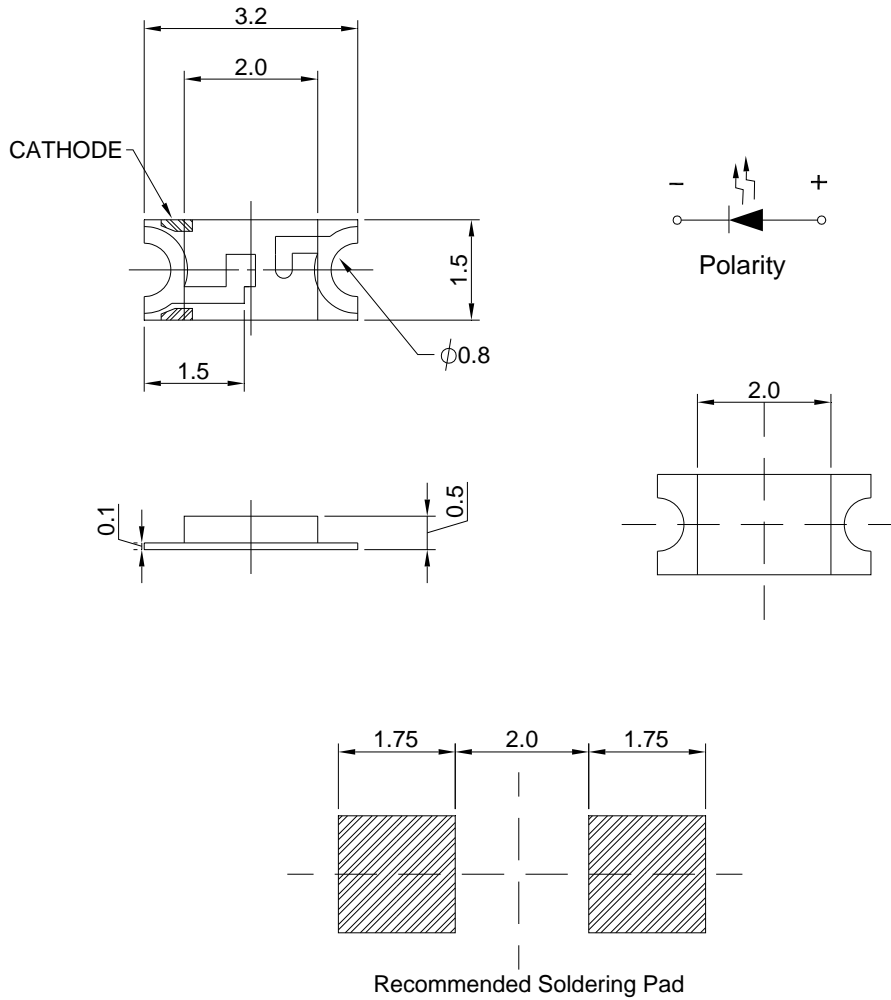
P _D (mW)	I _{FP} (mA)	I _F (mA)	Iron Solder(°C)	I _R (uA)@V _R =5V	Topr(°C)	Tstg(°C)
95	100*	25	350 ± 5 for 3 sec.	50	-40~+85	-40~+100

Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specify ratings in this table will result degradation of LED life-span and may cause LED to fail.

* I_{FP}: Peak Forward Current under 1/10 duty, 1KHz condition

Package Dimension:

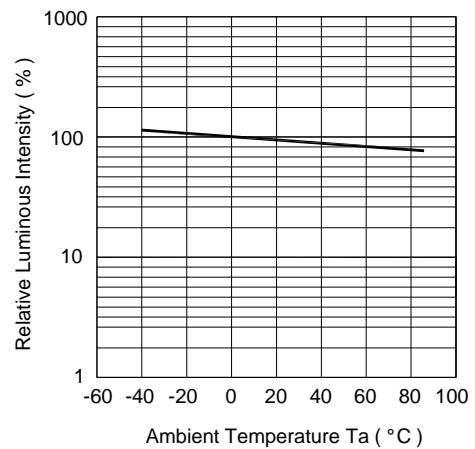
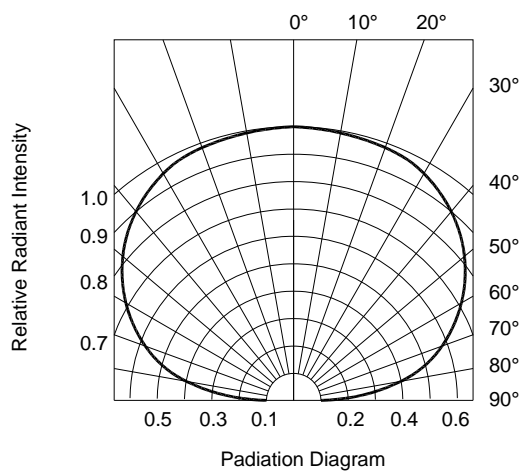
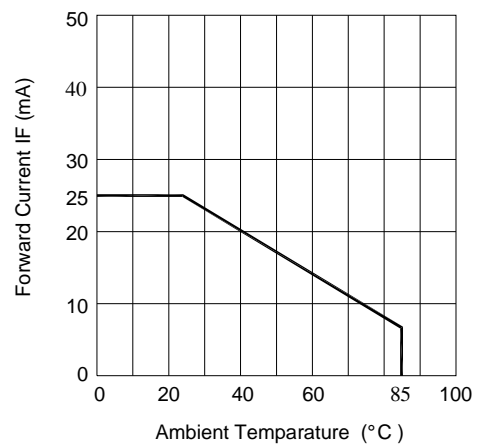
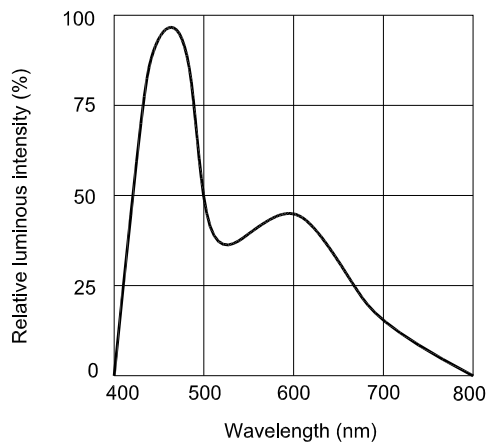
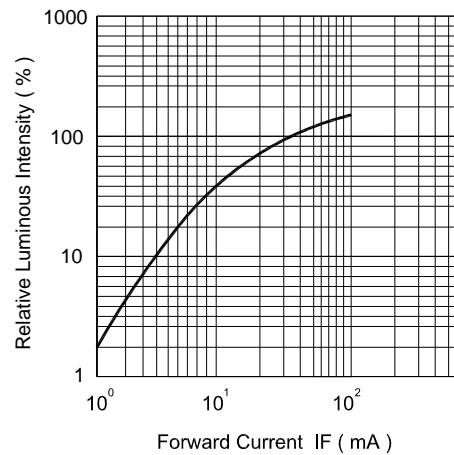
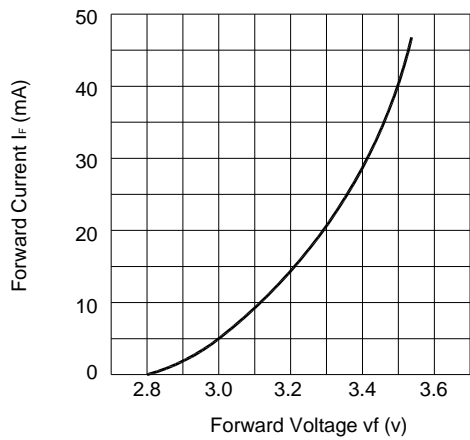
unit : mm



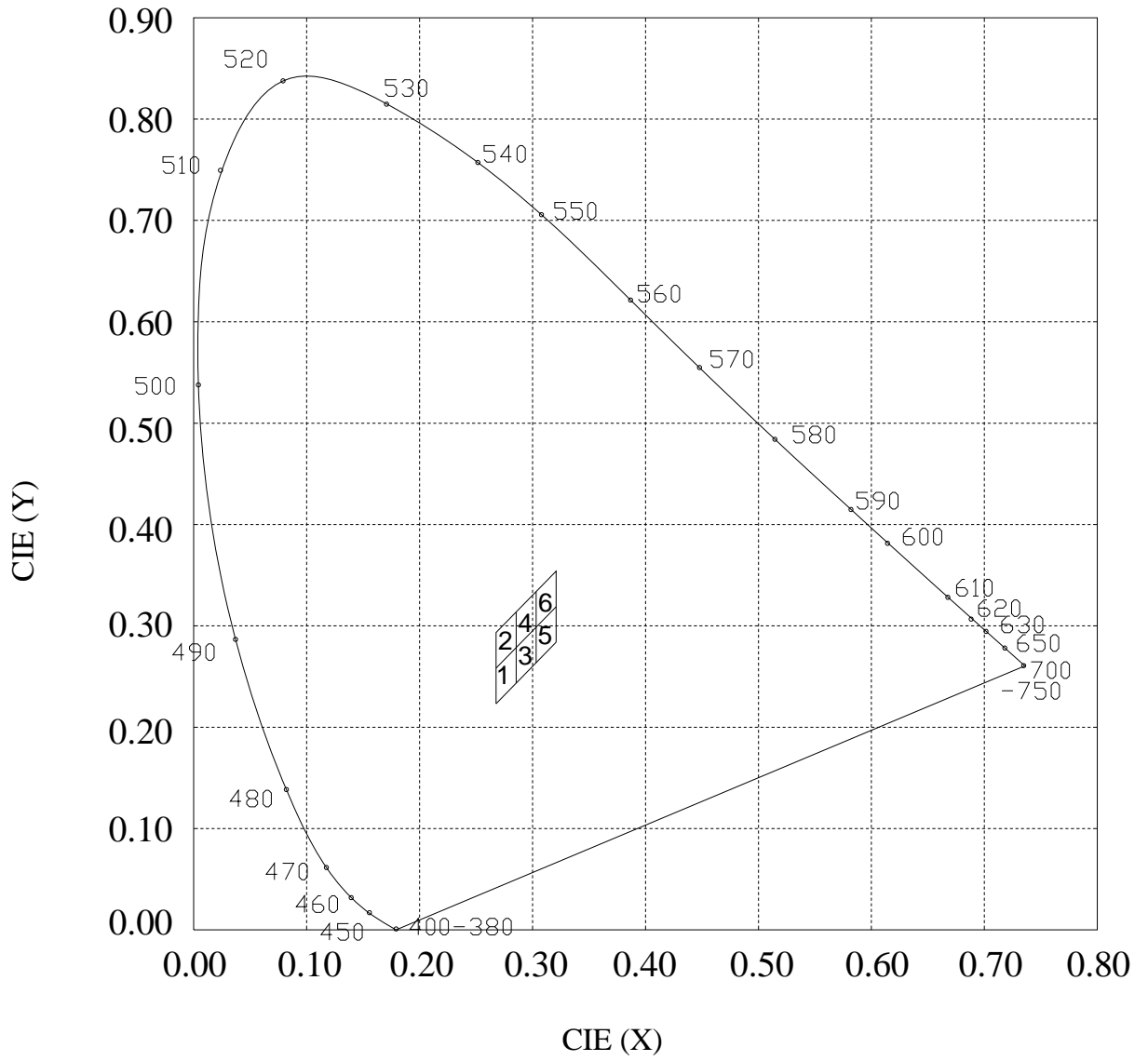
Notes:

1. All dimensions are millimeters.
2. Tolerance is ± 0.25 mm unless otherwise specified.
3. Specifications are subject to change without notice.

Typical Electro-optical Characteristics Curves



CIE Chromaticity Diagram



Color Ranks ($I_f=5\text{mA}$, $T_a=25^\circ\text{C}$)

Rank	CIE x	CIE y
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

Measurement uncertainty of the color coordinates: ± 0.01

Forward Voltage Ranks (at 20mA)

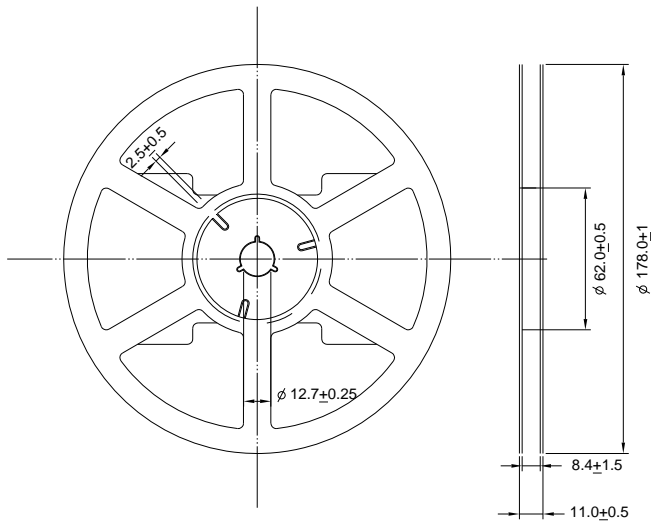
V _F Ranks	10	11	12	13	14
Min.	2.7	2.9	3.1	3.3	3.5
Max.	2.9	3.1	3.3	3.5	3.7

Luminous Intensity Ranks (at 20 mA)

I _v Rank	R2	S1	S2
Min.	140	180	225
Max.	180	225	285

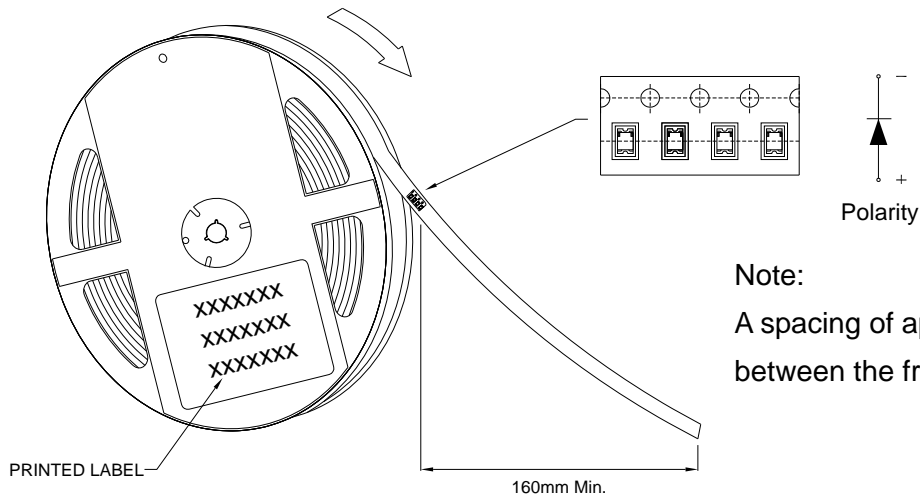
Reel Dimension:

unit : mm


Note:

Available in 8mm carrier tape on 178mm diameter reels. (2000 pieces)

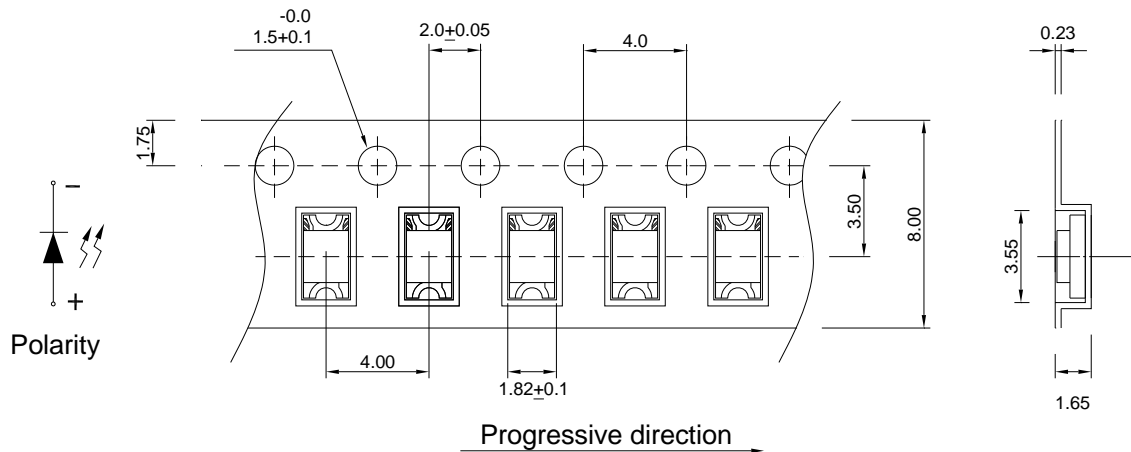
USER FEED DIRECTION


Note:

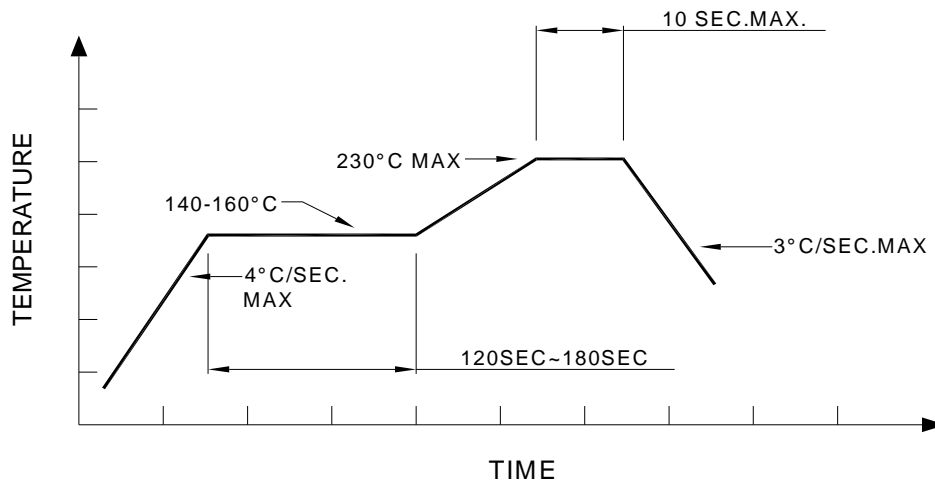
A spacing of approximately 160mm between the front edge of tape

Tape Dimension:

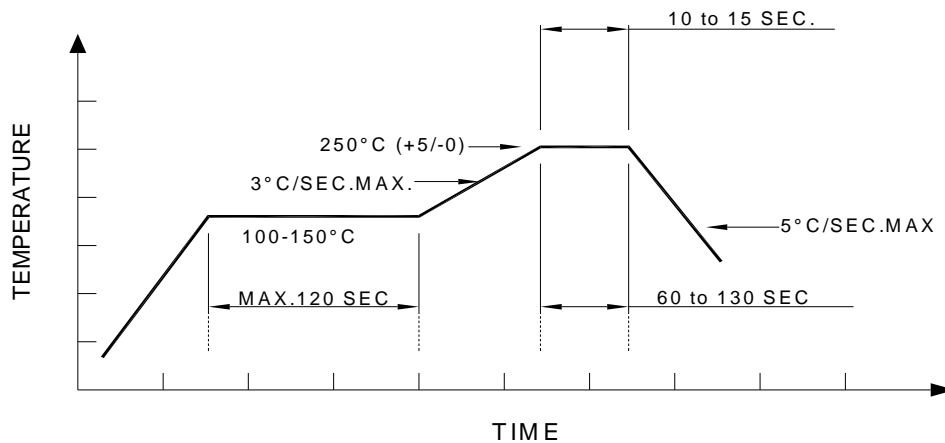
unit:mm



Recommended re-flow soldering profile:



Recommended Pb-free re-flow soldering profile:



Note:

All the specifications listed in this data sheet are suitable for general electronic equipment, office equipment and communication devices. Kindly consult Sales Representatives for specific reliabilities request, Forward Voltage, Luminous Intensity, Wavelength, Radiant Power or Viewing Angle.