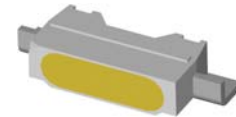


Side Emitted SMD LED 0.8mm Height

VR 3WB85

Description

The constructive of this series of LEDs are different from the PCB type SMD LED. The lead-frame is of metal, reflector is made of thermoplastic and construct into this unique type of SMD LED. The Wavelengths and Luminous Intensities of this series are grouped under 20mA for uniformity. To compliment further, a Zener Diode is integrated into the device to boost the ESD to 2KV DC.



Applications

- Dashboards and switch
- 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 (2θ1/2)	VF(V)	
		X	Y		Min.	Typ.		Typ.	Max.
VR 3WB85	White	0.29	0.28	Yellow	1050	1200	110	3.0	3.8

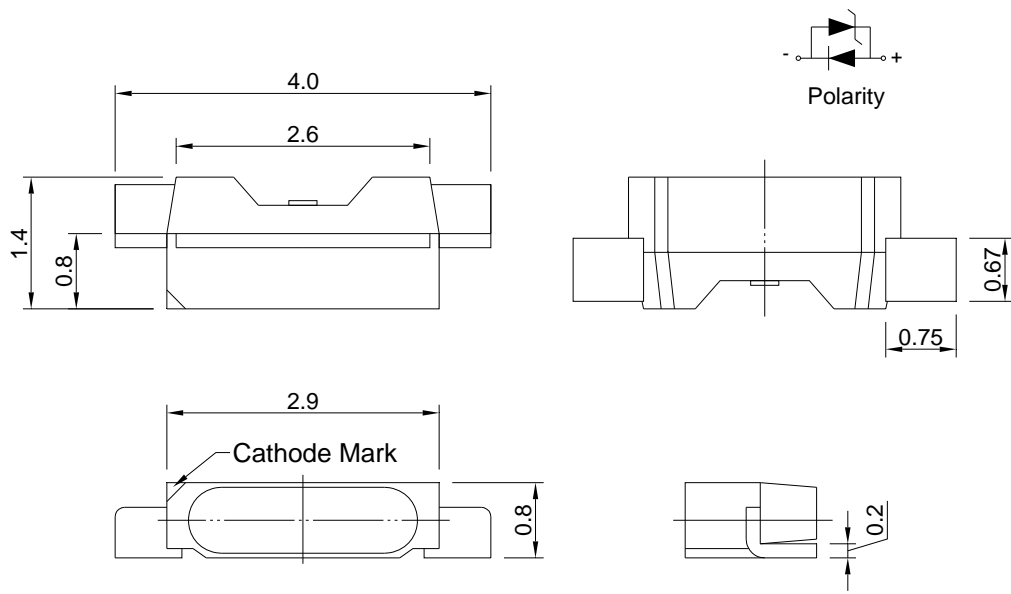
Absolute Maximum Ratings (at Ta=25°C)

Emitted Color	P _D (mW)	I _F (mA)	ESD(V)	I _R (uA) @VR=5V	Topr (°C)	Tstg (°C)
White	120	30	2000	50	-40~+85	-40~+90

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

Package Dimension:

unit : mm

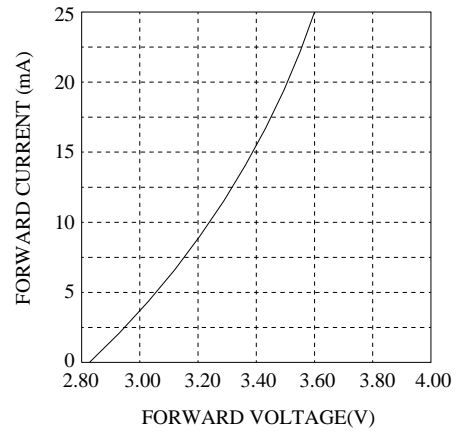
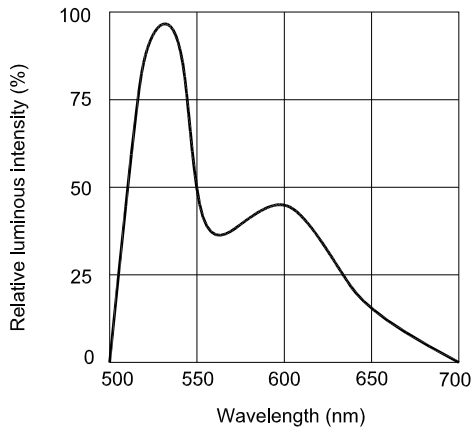


Notes:

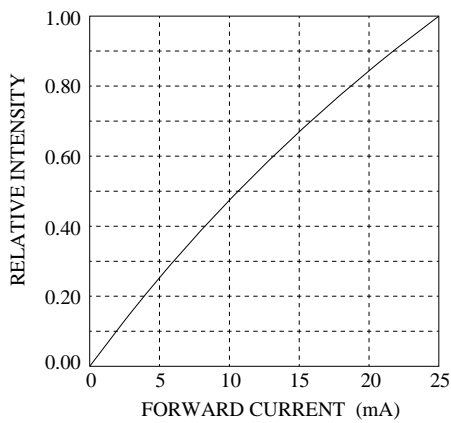
1. All dimensions are millimeters.
2. Tolerance is ± 0.2 mm unless otherwise specified.
3. Specifications are subject to change without notice.

Optical Characteristics Curves

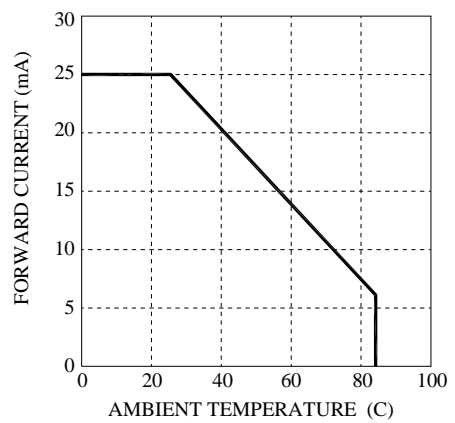
Forward Current vs. Forward Voltage



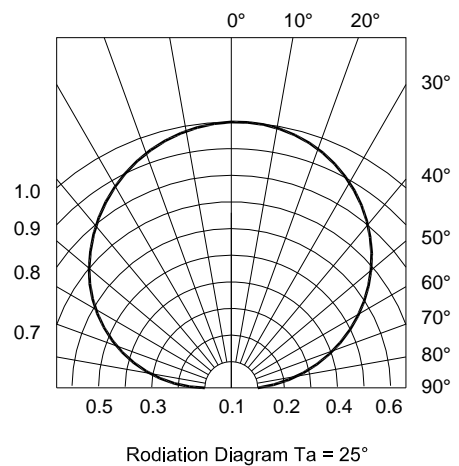
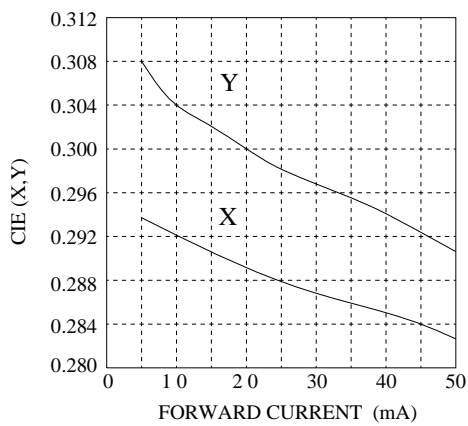
Relative Intensity vs. Forward Current



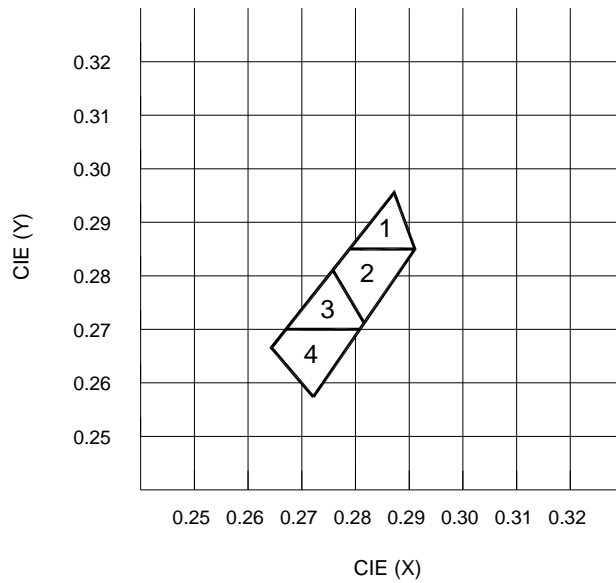
Forward Current vs. Ambient Temp.



Chromaticity Coordinate vs. Forward Current



CIE Chromaticity Diagram



Color Ranks ($I_F=20\text{mA}$, $T_a=25^\circ\text{C}$)

Rank	CIE x	CIE y	Rank	CIE x	CIE y
1	0.278	0.285	3	0.280	0.270
	0.287	0.295		0.266	0.277
	0.291	0.285		0.275	0.281
	0.292	0.286		0.282	0.272
2	0.281	0.271	4	0.272	0.257
	0.275	0.281		0.264	0.267
	0.278	0.285		0.266	0.270
	0.291	0.285		0.280	0.270

Measurement uncertainty of the color coordinates: ± 0.01

Specification of bin grade

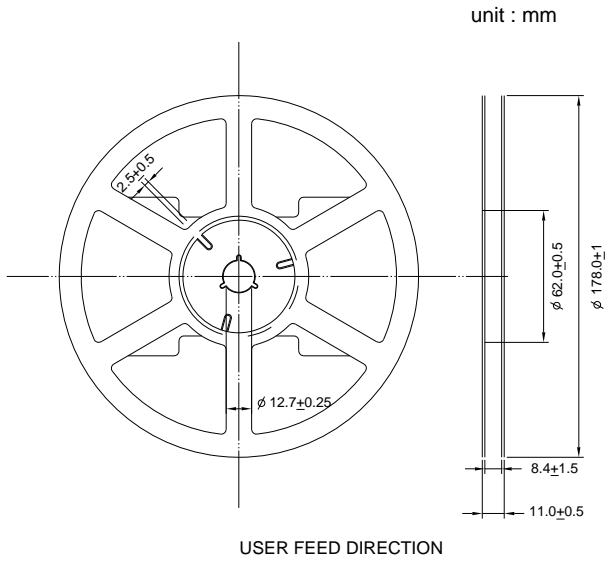
Luminous Intensity Rank @ 20 mA

Bin Code	45	46	--	--
LI (mcd)	1050-1200	1200-1350	--	--

Forward Voltage Rank @ 20 mA

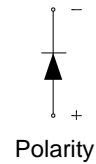
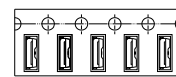
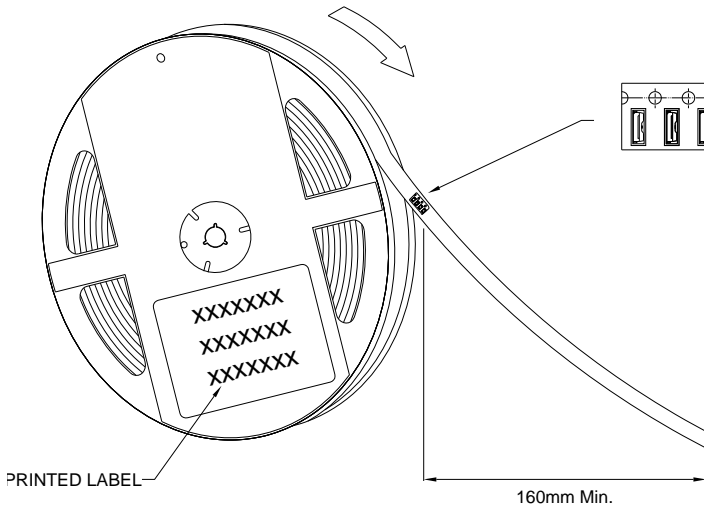
Bin Code	8	9	10	11
FV(V)	3.0-3.2	3.2-3.4	3.4-3.6	3.6-3.8

Reel Dimension:



Note:

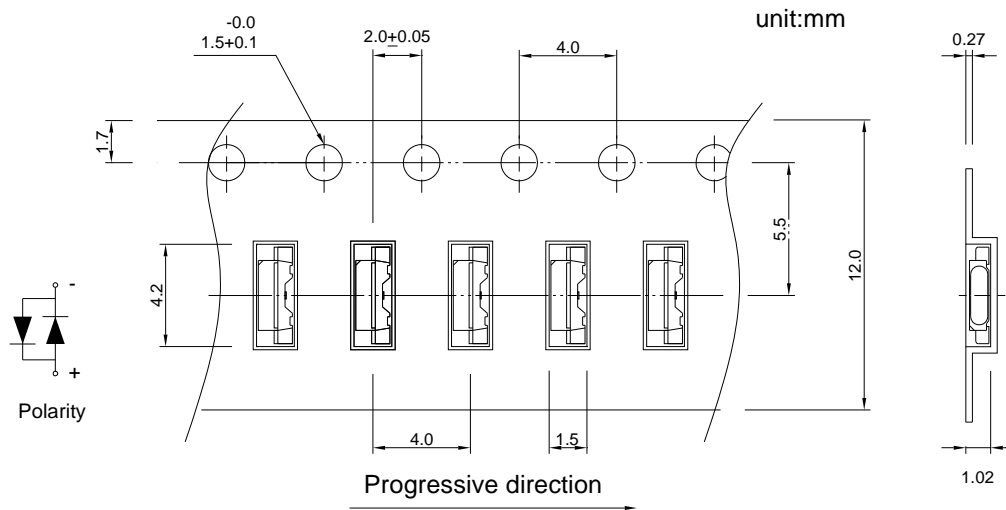
Available in 8mm carrier tape on 178mm diameter reels. (2500 pieces)



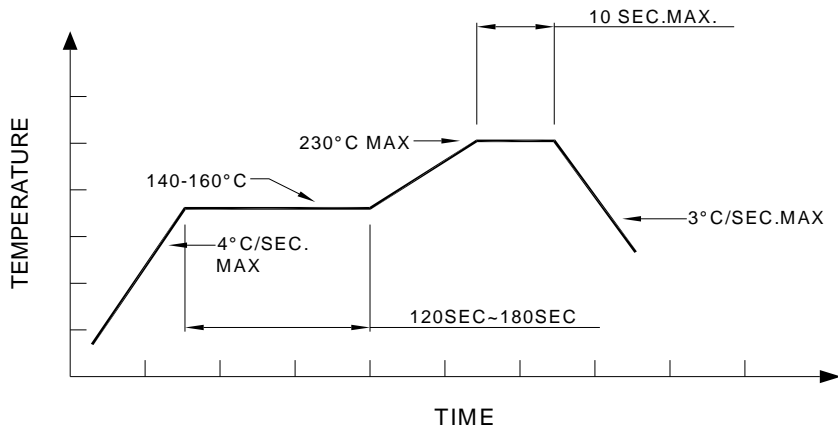
Note:

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

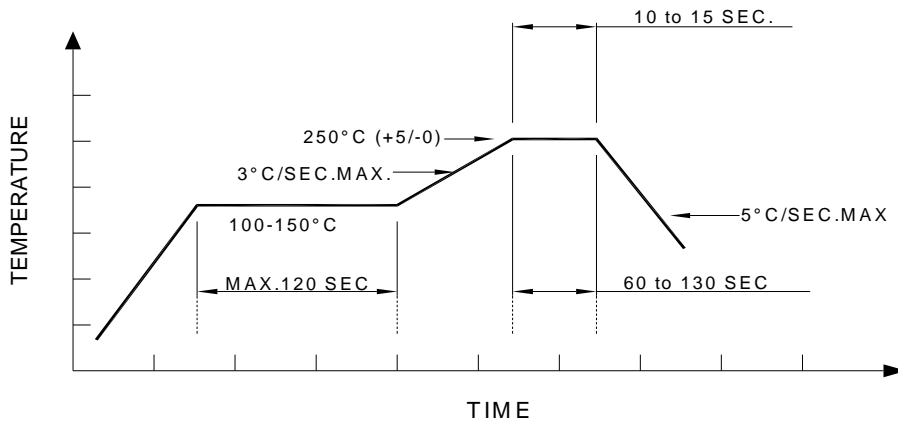
Tape Dimension:



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.