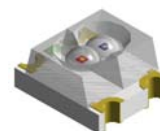


1210 Package Inner Lens Bi-Color LED

VS LL78

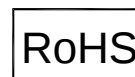
Description

This is Bi-Color SMD LED series with dimension 3.0 mm (L) * 2.5 mm (W) * 0.9 mm (H). The unique of these LED are made from AlGaInP and InGaN chips that provide high luminous intensity at low driving current. The lens design provides 60 degree viewing angle and suitable for backlighting purpose. The available colors are Blue/Yellow, Yellow-green/Red or even Red/Blue. Any color combinations specified by customers can be accepted.



Applications

- Industrial control systems signal indicator
- Automotive features
- Front panel indicator
- Status indication



Electronic Optical Characteristics (at 20mA):

Part Number	Emitted Color	λ (nm)		Iv(mcd)		Vf(Volt)		View Angle	Lens
		λ_d	λ_p	Min	Typ.	Typ.	Max.		
VS LL78	Red 	624	632	90	145	2.0	2.4	60	Clear
	Blue 	470	468	71	115	3.5	4.0		

Absolute Maximum Ratings (at Ta=25°C)

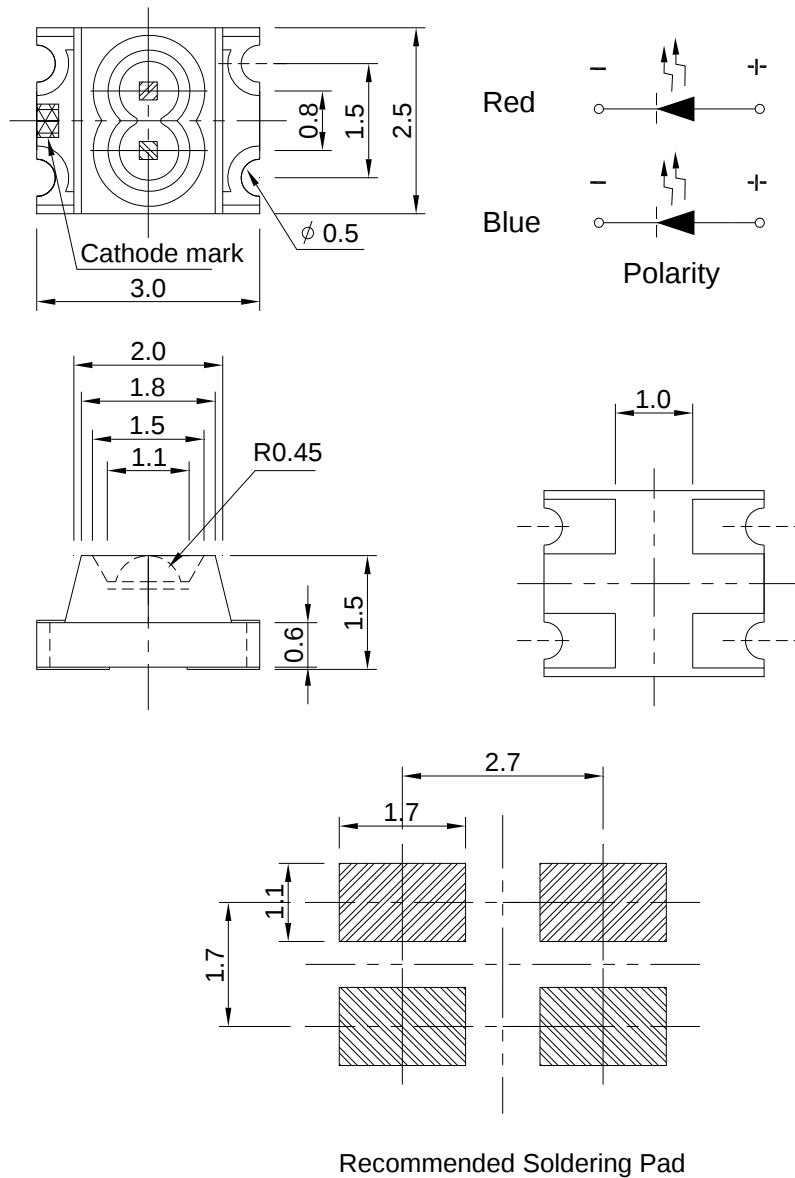
Emitted Color	P _D (mW)	I _F (mA)	I _{FP} (mA)	I _R (μ A) @ V _R =5V	Topr (°C)	Tstg (°C)
Red	60	25	60 *	10	-40~+85	-40~+90
Blue	110	25	100 *	50	-40~+85	-40~+90

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.

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

Package Dimension:

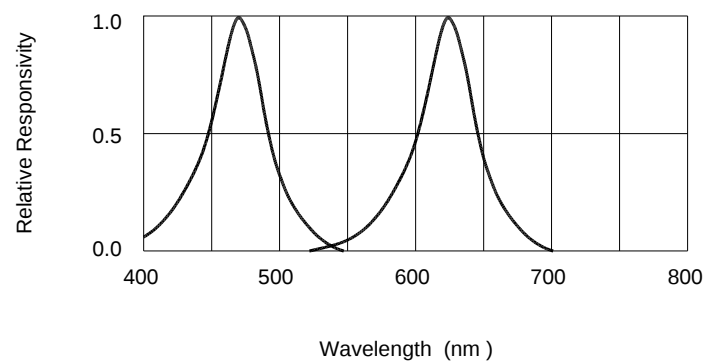
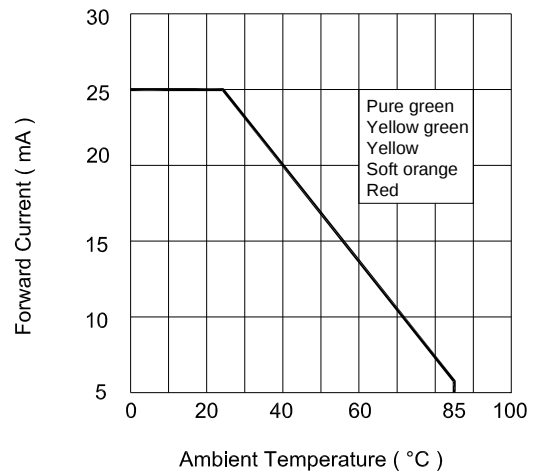
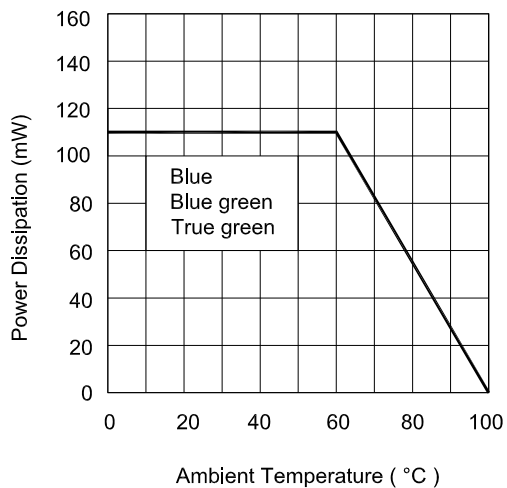
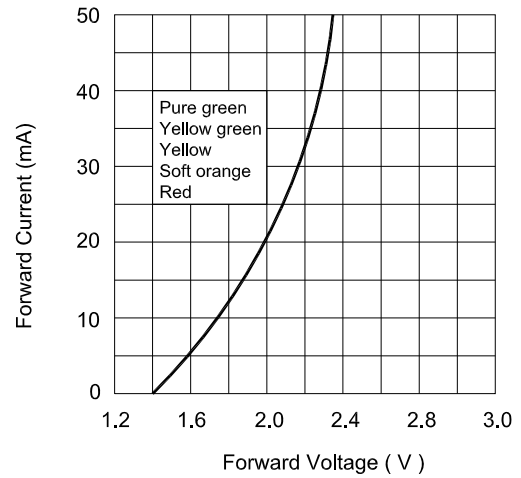
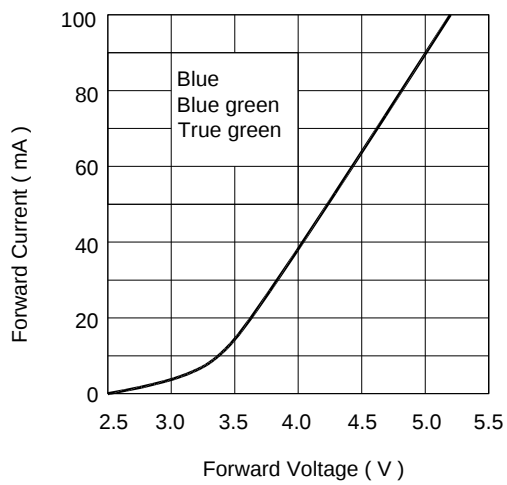
unit:mm



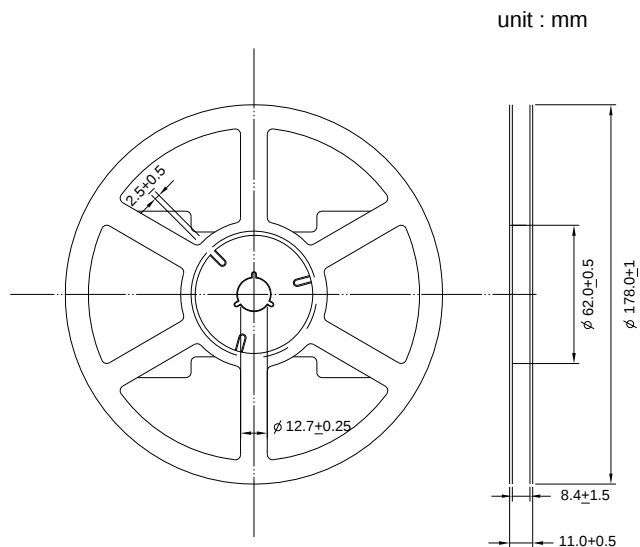
Notes:

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

Optical Characteristics Curves

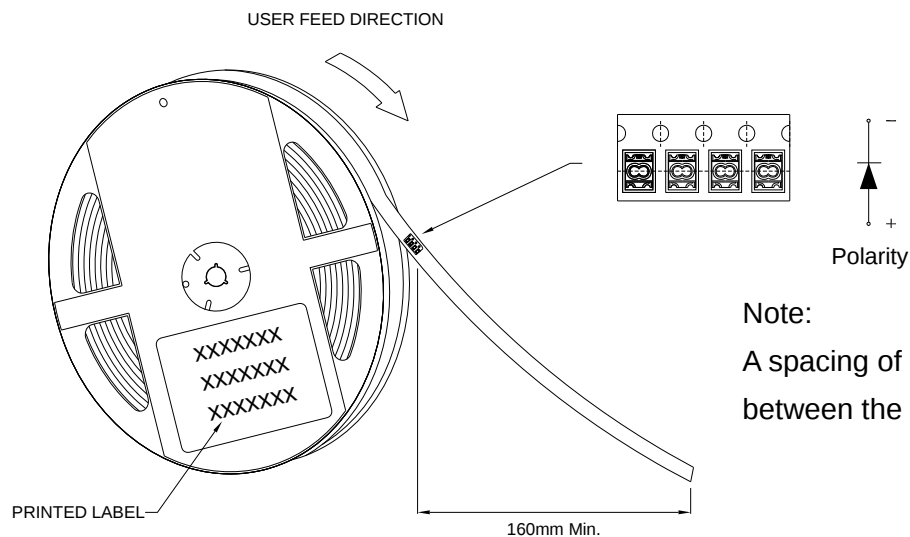


Reel Dimension:



Note:

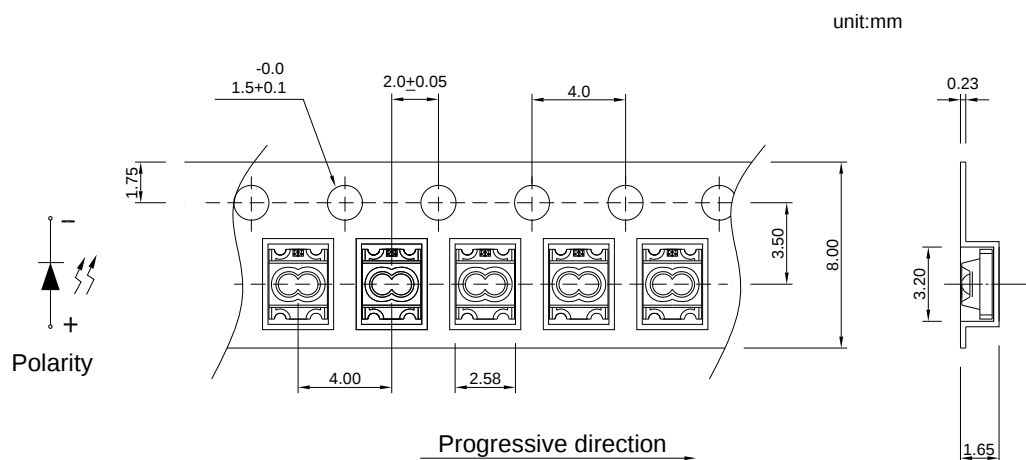
Available in 8mm carrier tape on 178mm diameter reels. (2000 pieces)



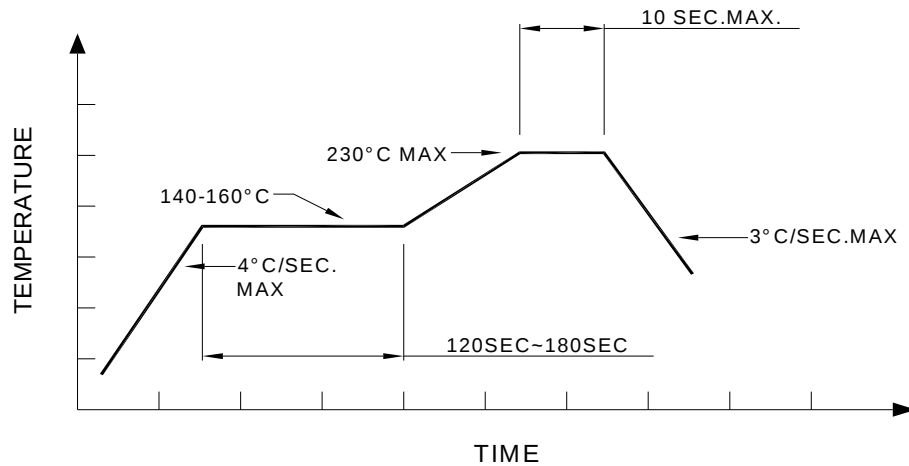
Note:

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

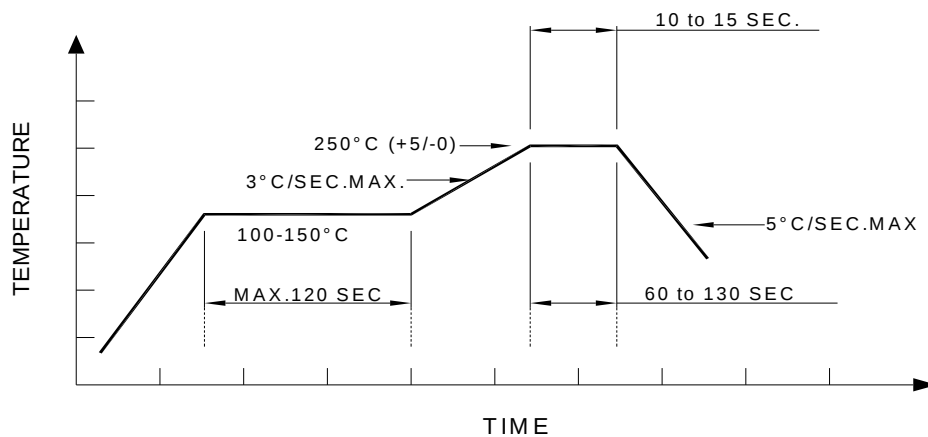
Tape Dimension:



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.