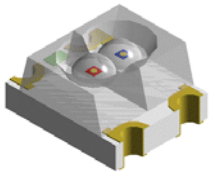
# 1210 Package Inner Lens Bi-Color LED

## VS LF78

### Description

This is Bi-Color SMD LED series with dimension 3.0 mm (L) * 2.5 mm (W) * 1.5 mm (H).The unique of these LEDs 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.



RoHS

pb-free

### Applications

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

**Electronic Optical Characteristics (@ 20mA):**

| Part Number | Emitted Color | λ (nm) | | Iv (mcd) | | Vf (Volt) | | View Angle | Lens |
|---|---|---|---|---|---|---|---|---|---|
| | | λ d | λ p | Min. | Typ. | Typ. | Max. | | |
| VS LF78 | Blue | 470 | 468 | 71 | 115 | 3.5 | 4.0 | 60 | Clear |
| | Yellow | 589 | 591 | 90 | 155 | 2.0 | 2.4 | | |

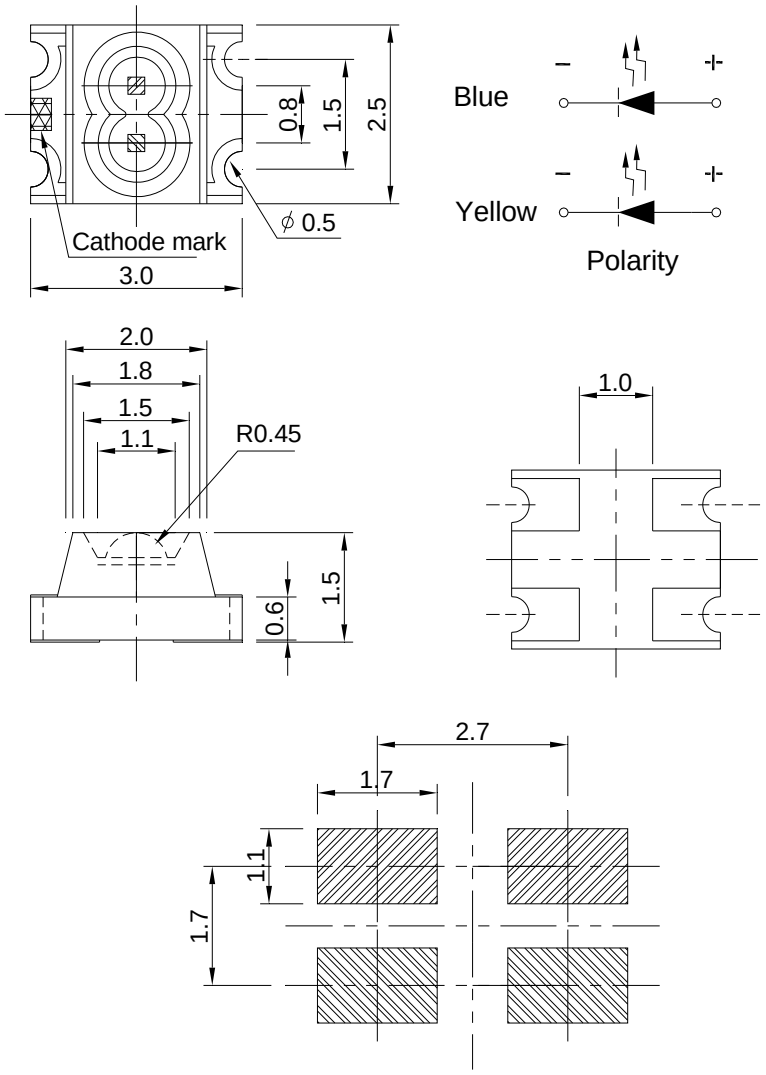
**Absolute Maximum Ratings ( @ Ta=25℃)**

| Emitted Color | $P_D$(mW) | If (mA) | ESD(V) | $I_R$(uA)@ VR=5V | Topr (℃) | Tstg (℃) |
|---|---|---|---|---|---|---|
| Blue (470nm) | 110 | 25 | 150 | 50 | -40~+85 | -40~+90 |
| Yellow (589nm) | 60 | 25 | 2000 | 10 | -40~+85 | -40~+90 |

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.

**Package Dimension:**

unit:mm





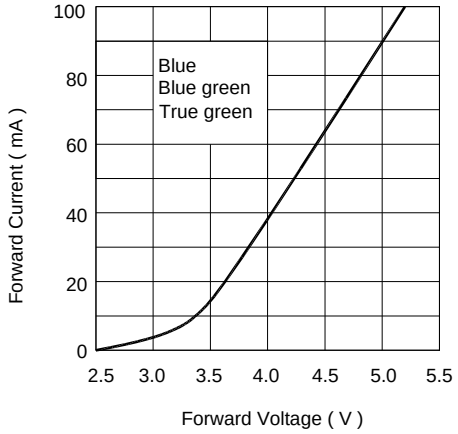


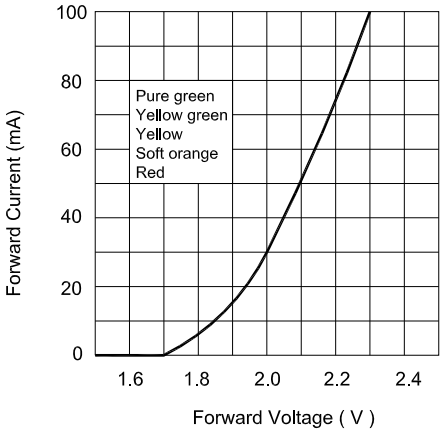
Recommended Soldering Pad

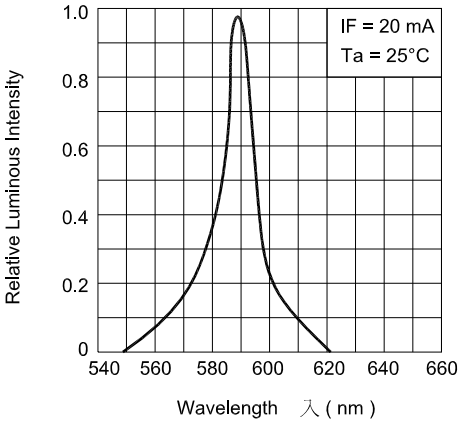
**Notes:**

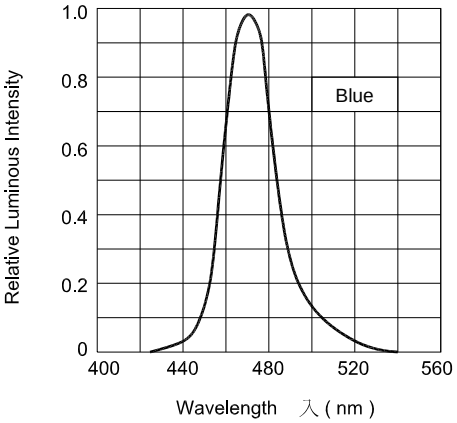
1. All dimensions are millimeters.
2. Tolerance is ± 0.2mm unless otherwise specified
3. Specifications are subject to change without notice.

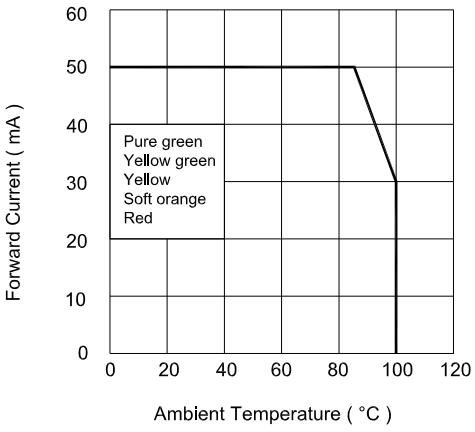
## Optical Characteristics Curves

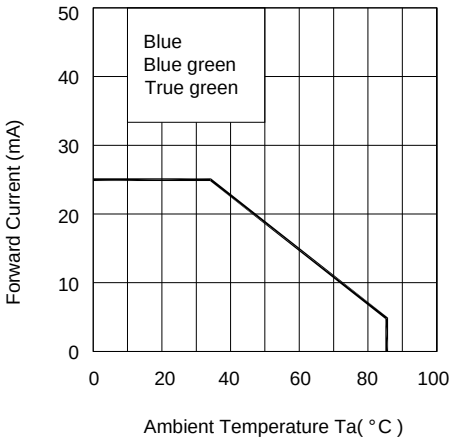


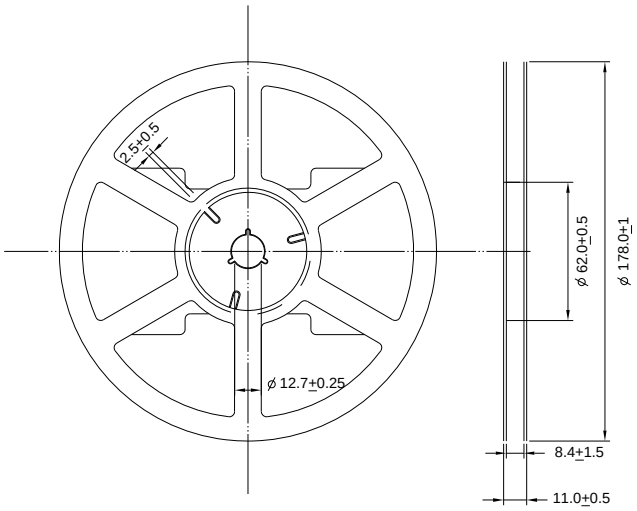



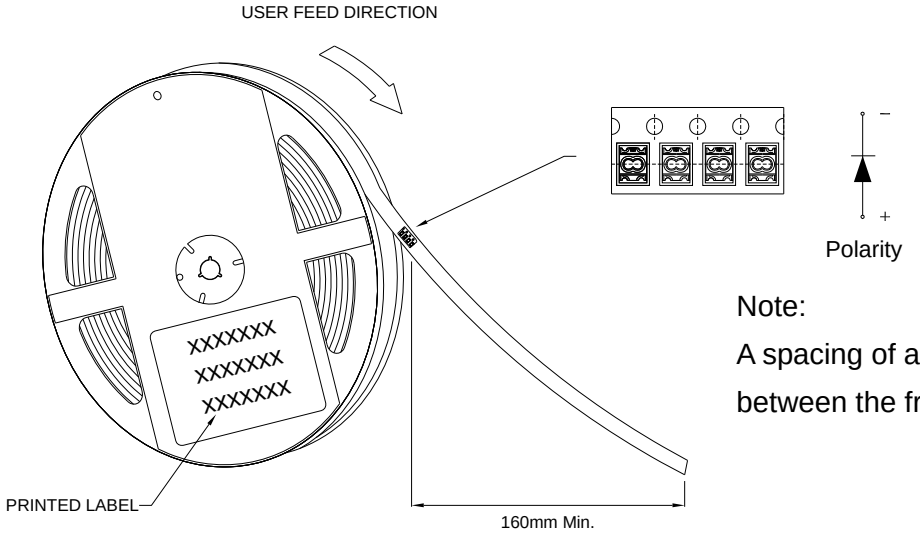
## Reel Dimension:

unit : mm




Note:

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

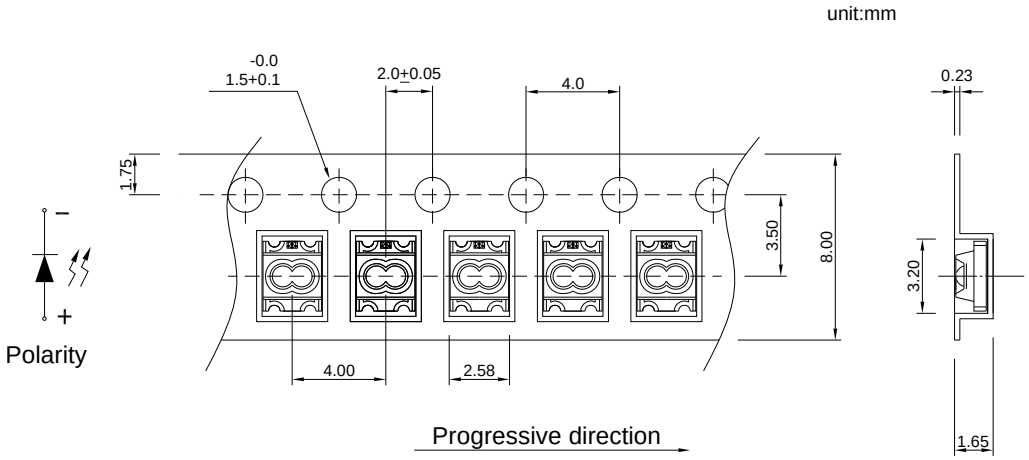



Note:

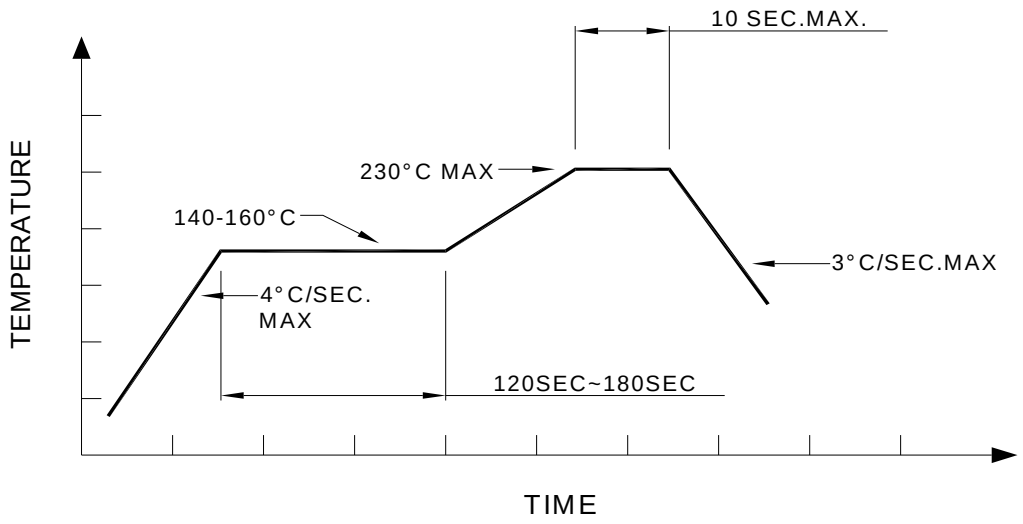
A spacing of approximately 160mm between the front edge of tape

## Tape Dimension:

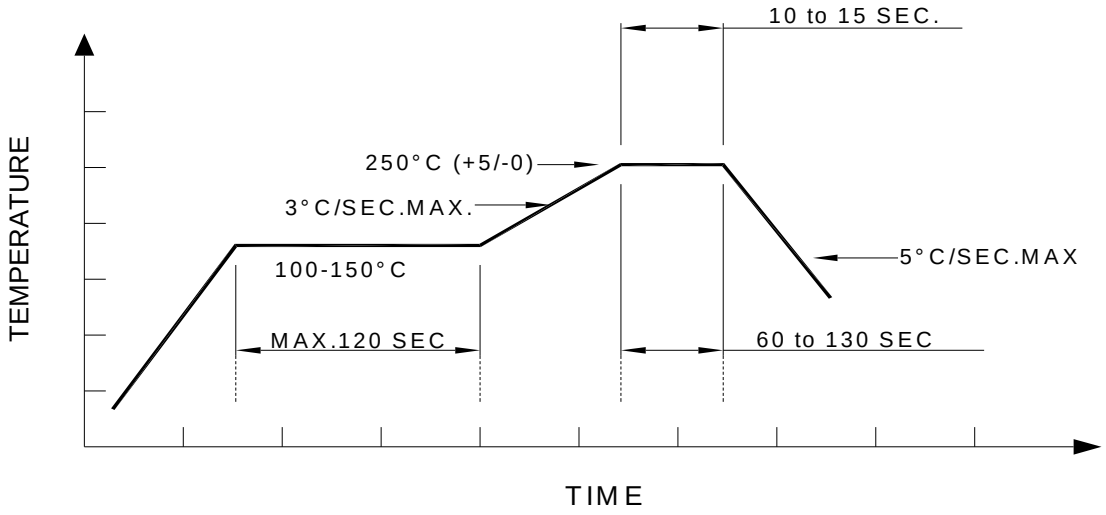
unit:mm



**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.