

## 0402 Package SMD LED 0.5mm Height

### VS 19D8

#### Description

The major breakthrough in VS 19D8 Orange color emitted, is package in dimension L x W x H, 1.0 \* 0.5 \* 0.45 mm. The dice used in this series is AlGaInP material rather than the conventional GaP and GaAsP/GaP. The advantages of AlGaInP 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                                                                              | $\lambda$ (nm) |             | Lens Color | Iv(mcd) |      | View Angle | VF(V) |      |
|-------------|--------------------------------------------------------------------------------------------|----------------|-------------|------------|---------|------|------------|-------|------|
|             |                                                                                            | $\lambda_d$    | $\lambda_p$ |            | Min.    | Typ. |            | Typ.  | Max. |
| VS 19D8     | Orange  | 615            | 621         | Clear      | 22      | 40   | 120        | 2.0   | 2.4  |

#### Absolute Maximum Ratings (at Ta=25°C)

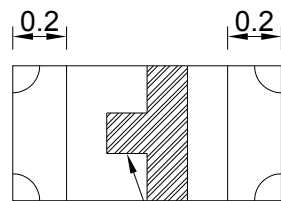
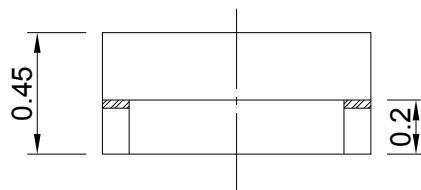
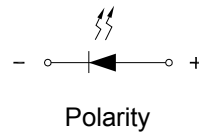
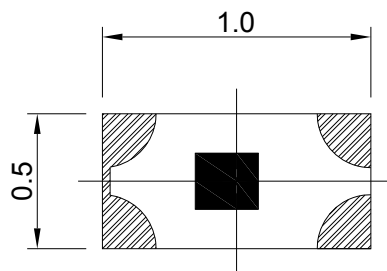
| P <sub>D</sub> (mW) | I <sub>FP</sub> (mA) | I <sub>F</sub> (mA) | Iron Solder (°C)   | I <sub>R</sub> (uA)@V <sub>R</sub> =5V | Topr(°C) | Tstg(°C) |
|---------------------|----------------------|---------------------|--------------------|----------------------------------------|----------|----------|
| 60                  | 100*                 | 25                  | 350 ± 5 for 3 sec. | 10                                     | -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.

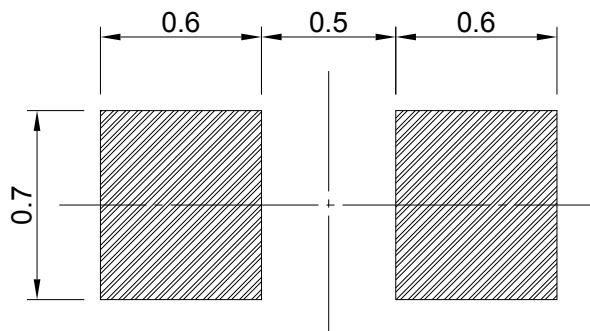
\* I<sub>FP</sub>: Peak Forward Current under 1/10 duty, 1KHz condition

## Package Dimension:

unit:mm



Cathode mark

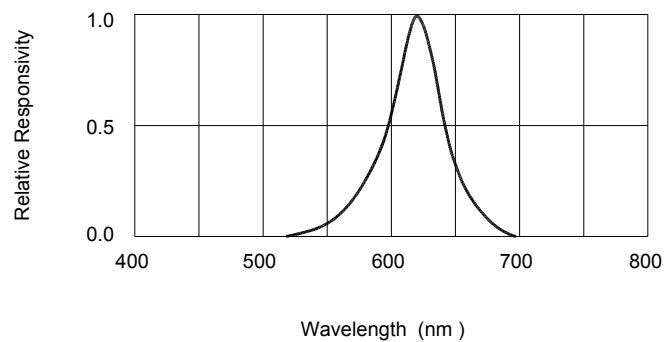
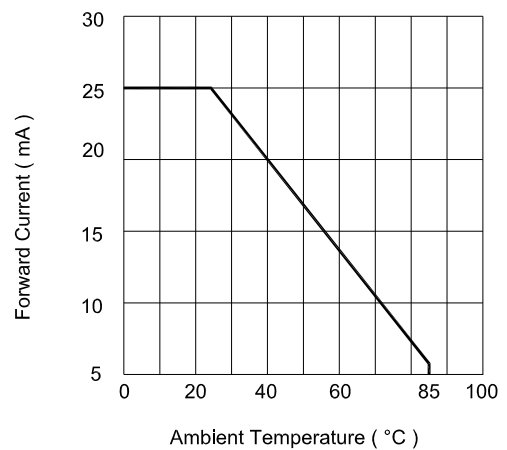
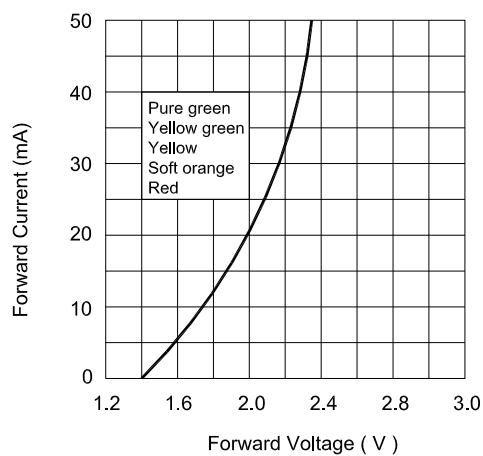
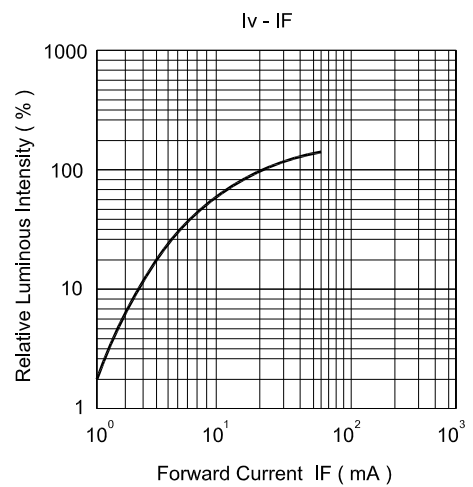
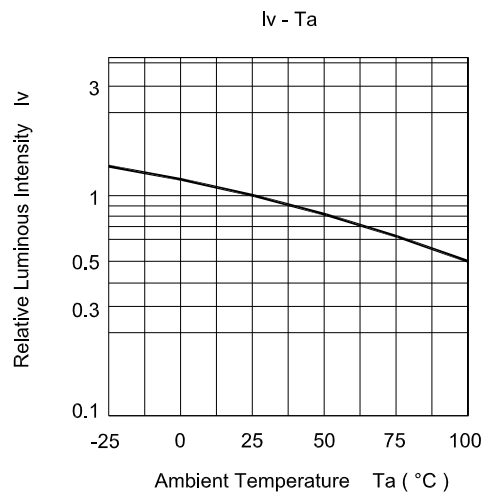


Recommended Soldering Pad

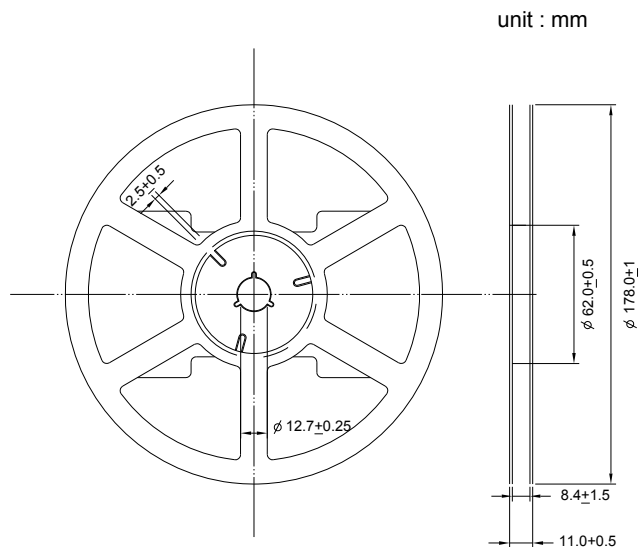
## Notes:

1. All dimensions are millimeters.
2. Tolerance is  $\pm 0.2\text{mm}$  unless otherwise specified.
3. Specifications are subject to change without notice.

## Optical Characteristics Curves

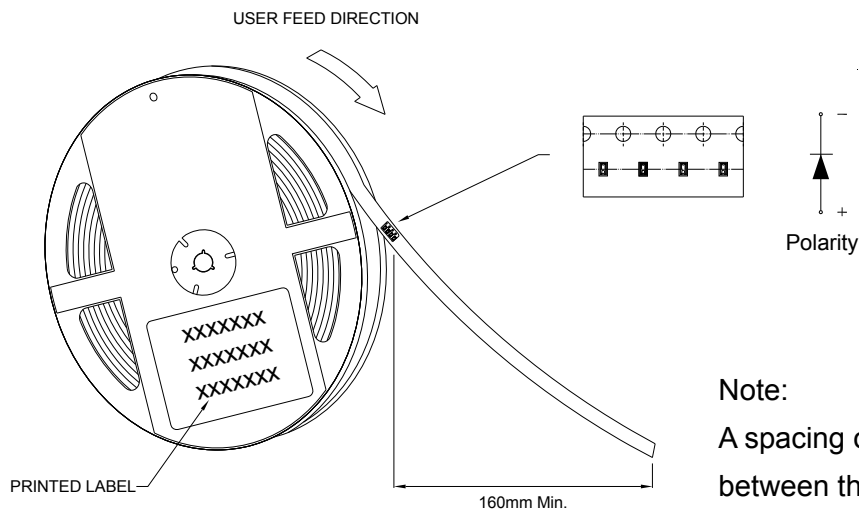


## Reel Dimension:



Note:

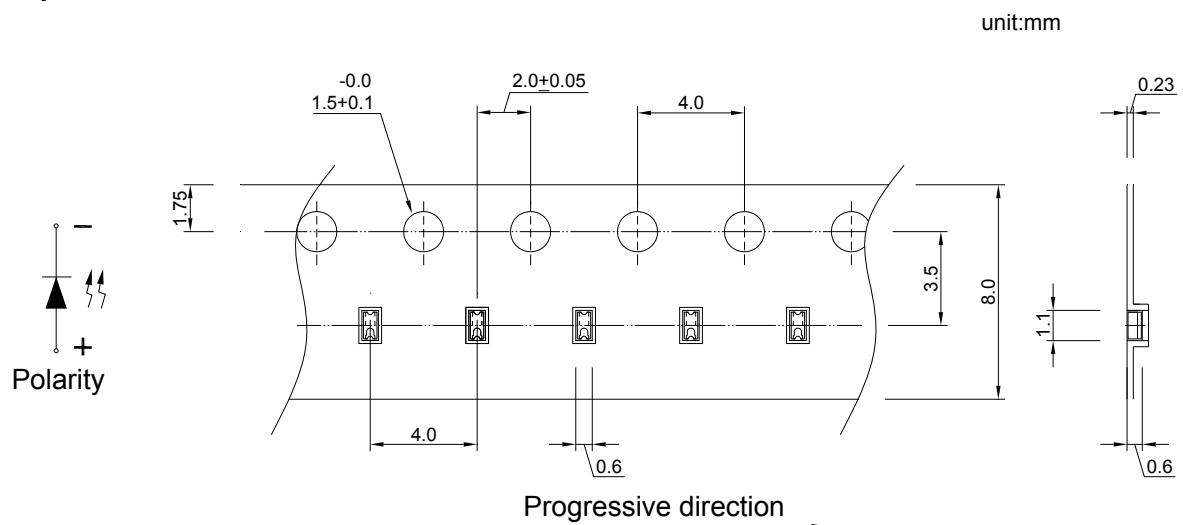
Available in 8mm carrier tape on 178mm diameter reels. (3000 pieces)



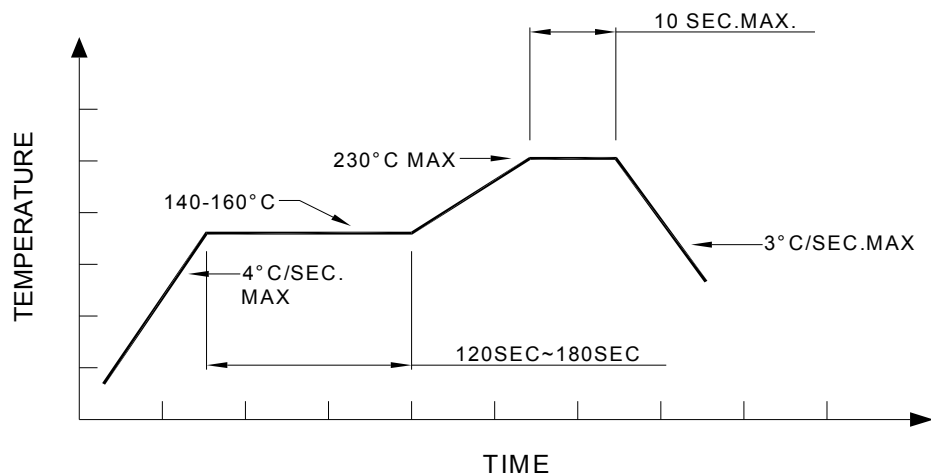
Note:

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

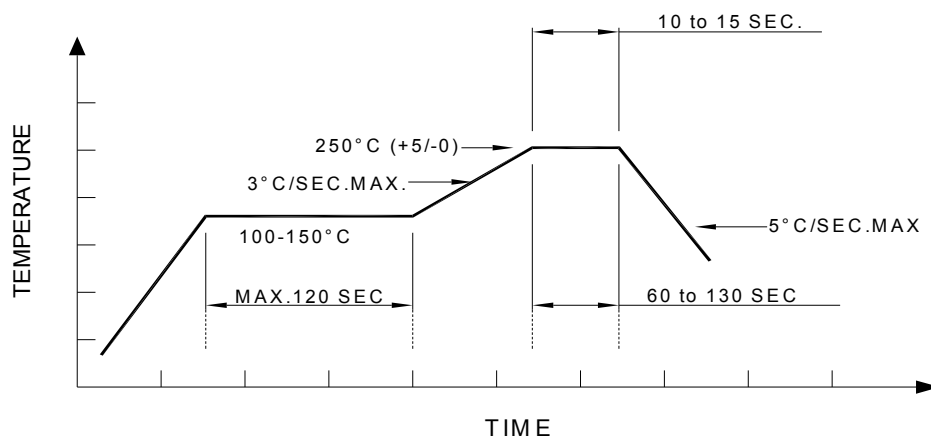
## Tape Dimension:



### 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.