

# TOS-F5167AA-B

## SMD Display LED

| Part Number   | Chip     |              | Face Color | Segment Color |
|---------------|----------|--------------|------------|---------------|
|               | Material | Source Color |            |               |
| TOS-F5167AA-B | GaAsP    | Amber        | Black      | White         |

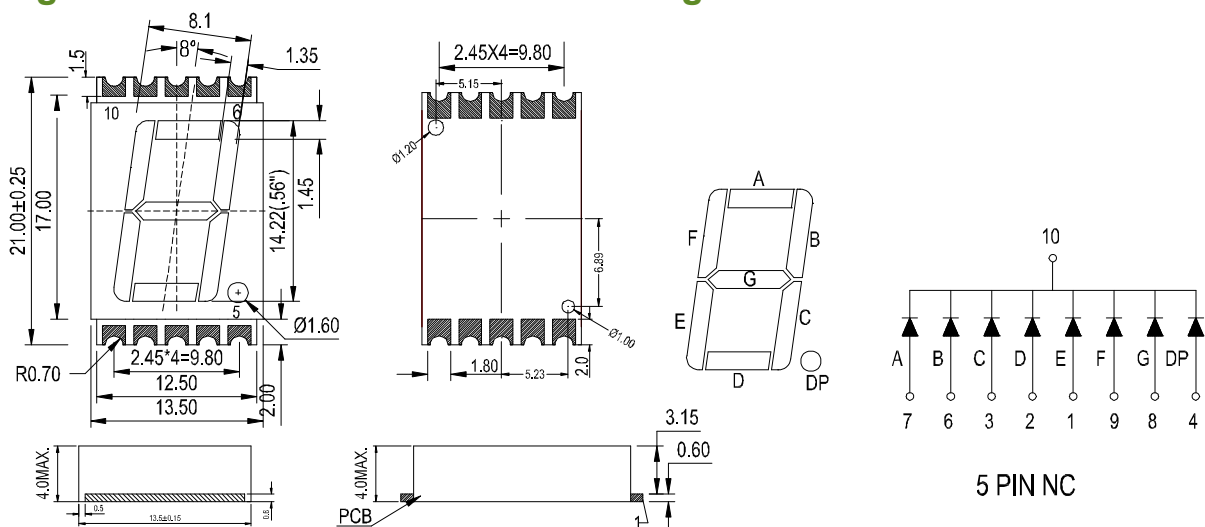
### Features

- (0.56") 14.22mm digit height
- Common cathode
- I.C. compatible
- Low power consumption
- RoHS compliant

### Applications

- Audio equipment
- Instrument panels
- Digital read out display

### Package Dimensions & Internal Circuit Diagram



**Notes:**

1. All dimensions are in millimeters, tolerance:  $\pm 0.25$  ; Angle:  $\pm 0.1^\circ$  unless otherwise noted.
2. Specifications are subject to change without notice.

## Absolute Maximum Rating @ Ta=25°C

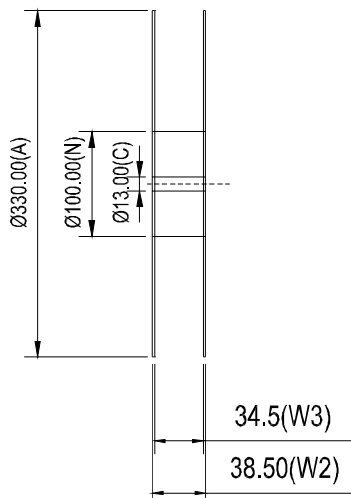
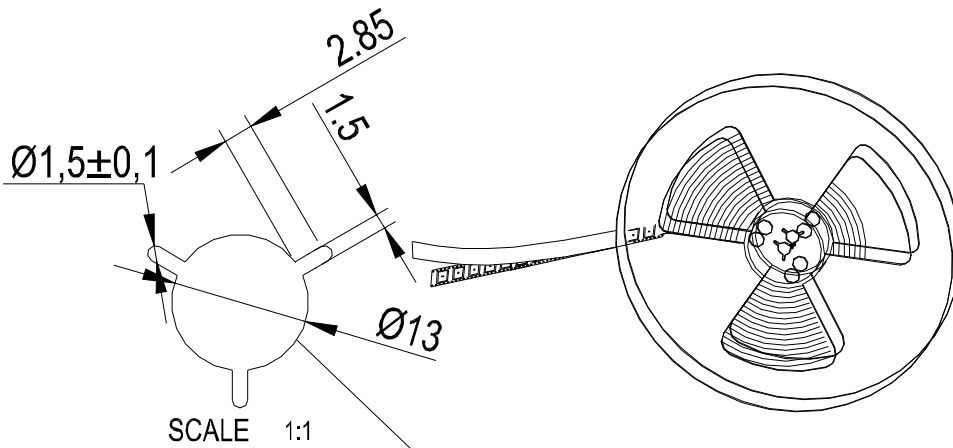
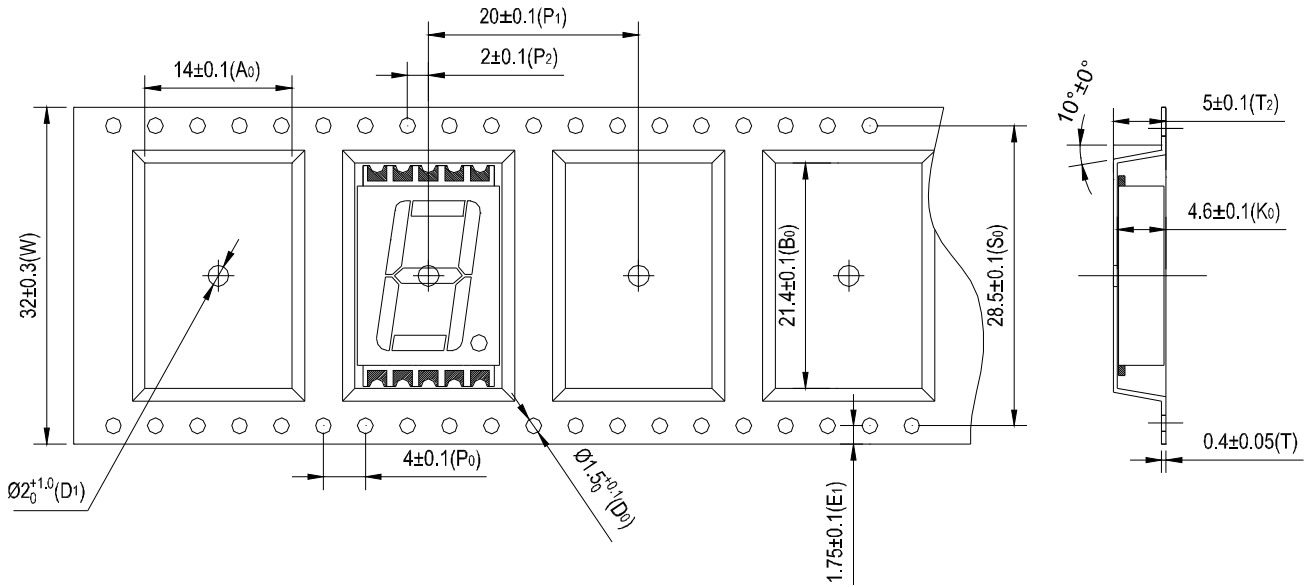
| Parameter   | Maximum Rating   | Unit |
|---|------------------|------|
| Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width) | 80               | mA   |
| Power Dissipation   | 75               | mW   |
| Continuous Forward Current                                | 20               | mA   |
| Recommend Operating Current                               | 12               | mA   |
| Reverse Voltage   | 5                | V    |
| Operating Temperature Range                               | -25°C to +85°C   |      |
| Storage Temperature Range                                 | -30°C to +85°C   |      |
| Lead-Free Solder Temperature                              | 250°C for 10 Sec |      |

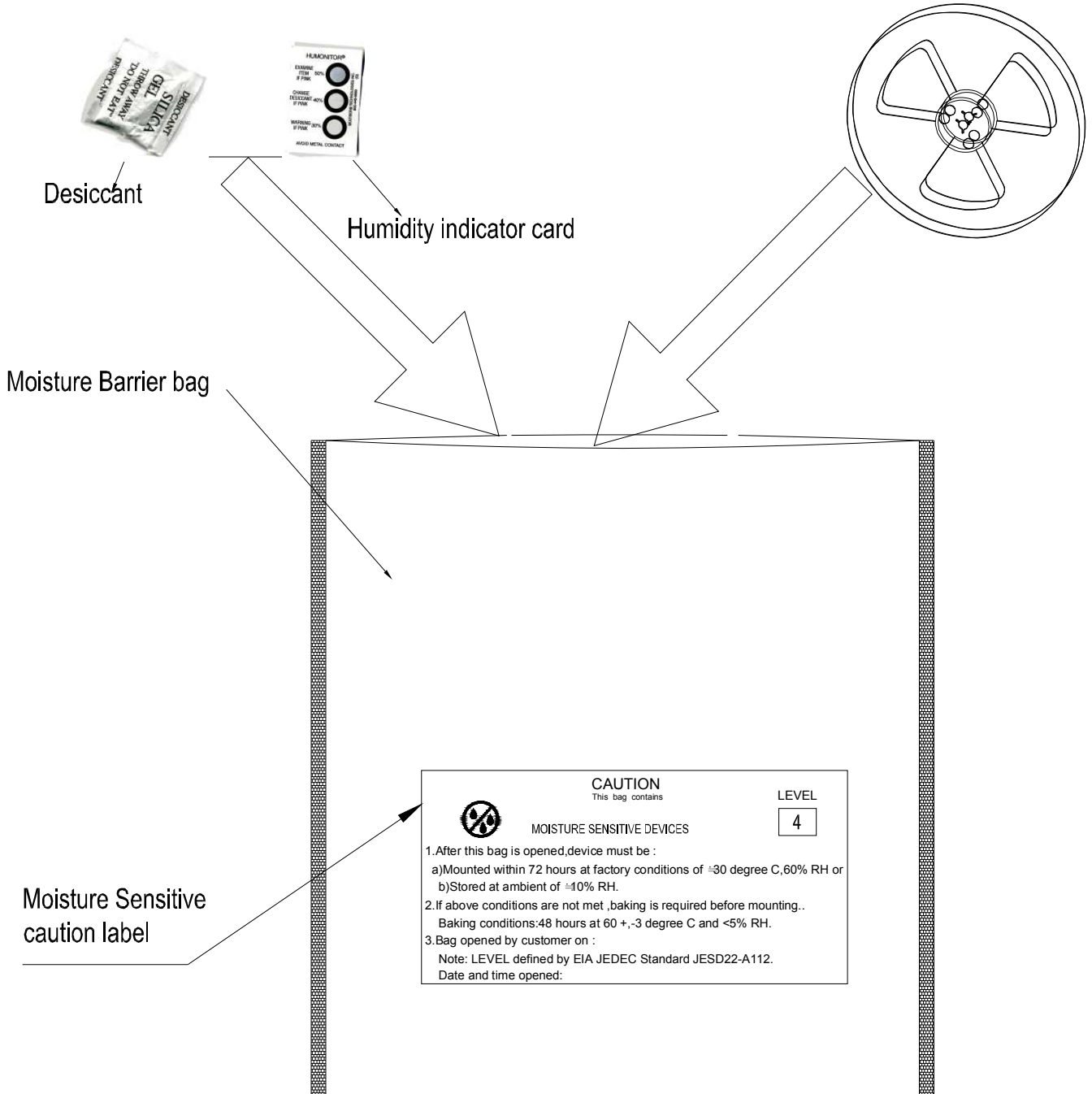
## Electrical / Optical Characteristic @ Ta=25°C

| Parameter                        | Symbol            | Min. | Typ. | Max.  | Unit | Test Condition       | Grade |
|----------------------------------|-------------------|------|------|-------|------|----------------------|-------|
| Luminous Intensity               | I <sub>v</sub>    |      | 3000 |       | ucd  | I <sub>F</sub> =10mA |       |
| Dominant Wavelength              | λ <sub>d</sub>    |      | 605  |       | nm   | I <sub>F</sub> =20mA |       |
| Spectral Line Half-Width         | Δλ                |      | 35   |       | nm   | I <sub>F</sub> =20mA |       |
| Forward Voltage                  | V <sub>F</sub>    | 1.8  | 2.1  | 2.4   | V    | I <sub>F</sub> =20mA |       |
| Reverse Current                  | I <sub>R</sub>    |      |      | 100   | μA   | V <sub>R</sub> =5V   |       |
| Luminous Intensity Matching Rate | I <sub>v</sub> -m |      |      | 2.0:1 |      | I <sub>F</sub> =20mA |       |

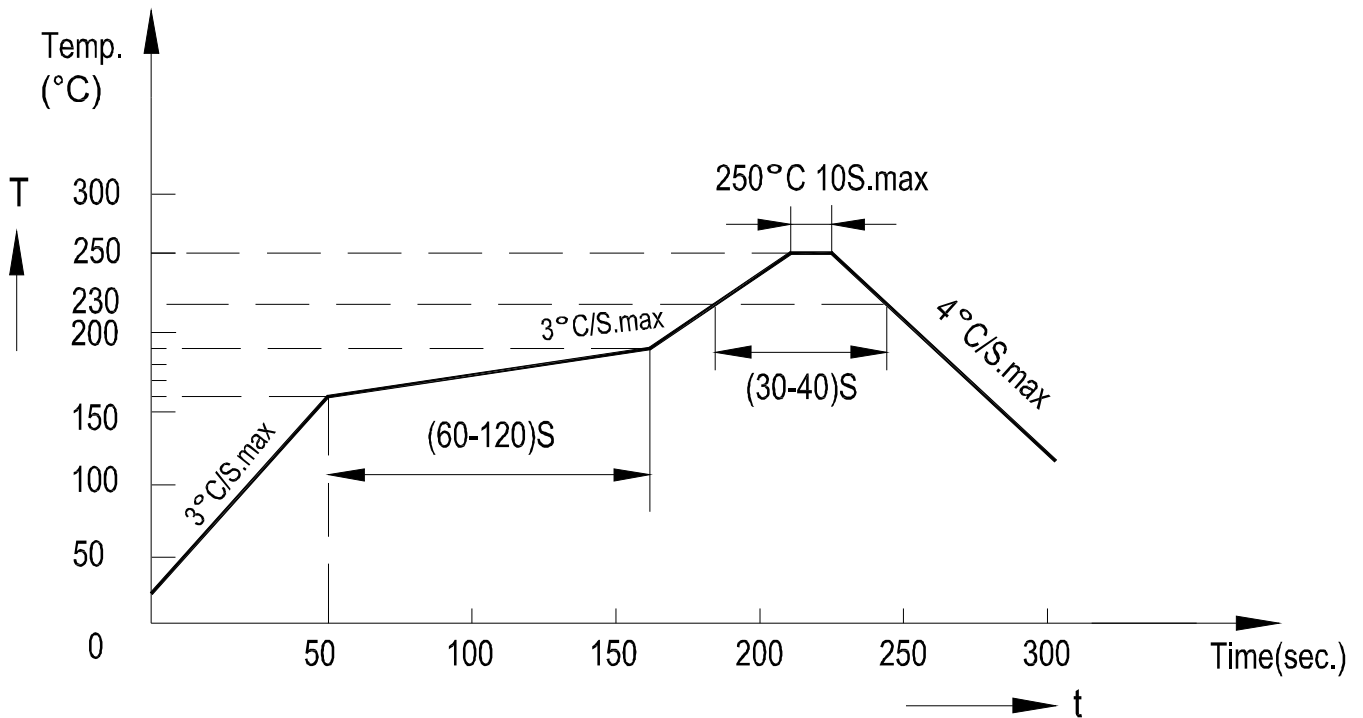


**Package Description**



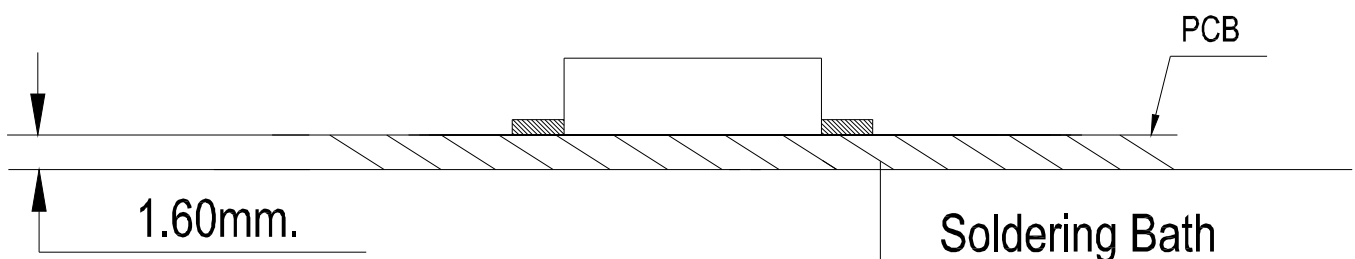


## Soldering Profile

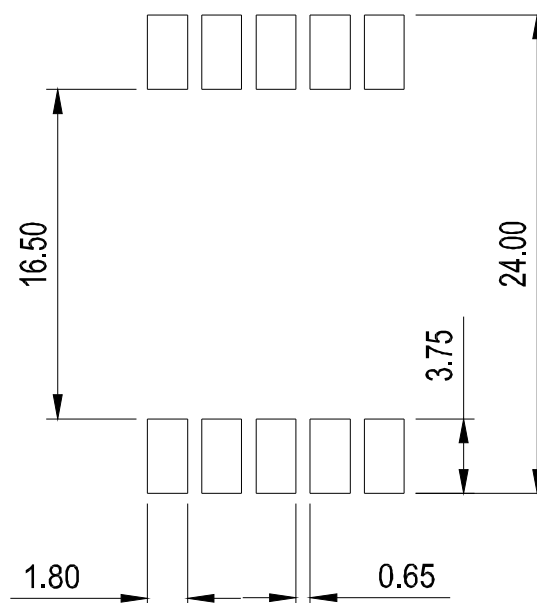


Number of reflow process shall be 2 times or less

1. Manual soldering temperature : Max 320°C for 3 Sec
2. Can be second manual soldering, but must be cooling before second manual soldering, In order to guarantee the soldered area is to be smoothly covered with soldering, can delay the soldering time, but not to exceed 20s every pad, because if that, the pad will be damaged.
3. The minimum distance of display seating plan to soldering bath is 1.6mm.
4. Don't cause stress to the epoxy resin while it is exposed to high temperature.



## Recommended Soldering Pattern and Storage Condition



1. This part is a moisture sensitive device, According to JEDEC level 4.
2. The storage condition of packed:  $\leq 40^{\circ}$  / 90%RH, 12 months or  $\leq 10\%$ RH
3. The storage condition of unpacked:  $\leq 30^{\circ}$  / 60%RH, 72 Hrs or  $\leq 10\%$ RH

This part can endure ultrasonic cleaning, the solvent hydrocarbon is suitable but isopropyl-alcohol base is not.