

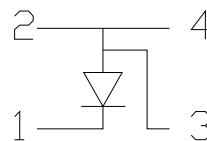
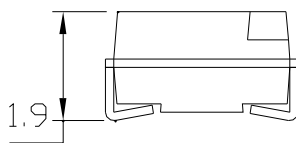
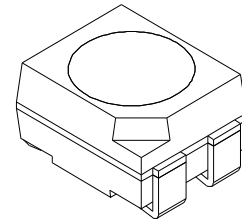
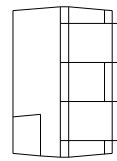
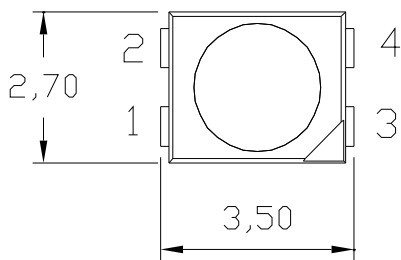
**Features:**

- Package: white PLCC-4 package
- Small package with high efficiency
- Color coordinates:  $x=0.33, y=0.33$  according to CIE 1931
- Thermal resistance: 80K/W
- ESD protection, 2KV HBM
- Soldering methods: SMT

**Applications:**

- Interior automotive lighting
- Backlighting
- Reading lamp
- Decorative and entertainment lighting

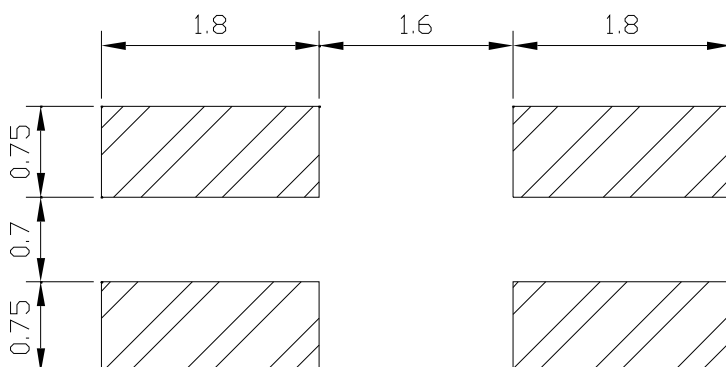
**1. Mechanical Dimensions**



**Notes:**

1. Unit: mm
2. Drawings are not to scale.
3. All dimensions are in millimeter.
4. General tolerance is 0.2mm.

## Recommended Solder Pad



### Notes:

1. Unit: mm
2. Drawings are not to scale.
3. All dimensions are in millimeter.
4. General tolerance is 0.1mm.

## 2. Absolute Maximum Ratings

| Parameter                 | White series                            |
|---------------------------|-----------------------------------------|
|                           | Value                                   |
| DC Forward Current (mA)   | 150                                     |
| Peak Pulse Current (mA)   | 180                                     |
| LED Junction Temperature  | 125°C                                   |
| LED Operating Temperature | -40 °C~110°C                            |
| Storage Temperature       | -40°C ~120°C                            |
| Soldering Temperature     | Max 260°C                               |
| ESD Sensitivity           | 2000V HBM                               |
| Reverse Voltage           | Not design to be driven in reverse bias |
|                           | ( $V_R \leq 5V$ )                       |

### 3. General Characteristics at 150mA

#### 3.1 Luminous Flux at 150mA, $T_a=25^{\circ}\text{C}$

| Color    | Part Number | Luminous Flux(lm) |         | Light Pattern |
|----------|-------------|-------------------|---------|---------------|
|          |             | Minimum           | Typical |               |
| Daylight | VAOS -SP4W4 | 20                | 25      | Lambertian    |

**Notes:**

1. Luminous flux measurement accuracy is 10%

#### 3.2 Optical Characteristics at 150mA, $T_a=25^{\circ}\text{C}$

| Light Pattern | Color    | Correlated Color Temperature CCT                               |        |        | Spectral Half-width (nm) | Temperature Coefficient of $\lambda_d$ (nm/ $^{\circ}\text{C}$ ) | Viewing Angle Degree |
|---------------|----------|----------------------------------------------------------------|--------|--------|--------------------------|------------------------------------------------------------------|----------------------|
|               |          | Dominant Wavelength $\lambda_d$ or Peak Wavelength $\lambda_p$ |        |        |                          |                                                                  |                      |
|               |          | Min.                                                           | Typ.   | Max.   | $\Delta\lambda_{1/2}$    | $\Delta\lambda_d/\Delta T_j$                                     | $2\theta_{1/2}$      |
| Lambertian    | Daylight | 5000 K                                                         | 6300 K | 7000 K | --                       | --                                                               | 120                  |

**Notes:**

1. CCT measurement accuracy of 200K.

#### 3.3 Electrical Characteristics at 150mA, $T_a=25^{\circ}\text{C}$

| Light Pattern | Color    | Forward Voltage $V_F$ (V) |      |      | Temperature Coefficient of $V_F$ (mV/ $^{\circ}\text{C}$ ) | Thermal Resistance Junction to lead ( $^{\circ}\text{C}/\text{W}$ ) $R\theta_{J-L}$ |
|---------------|----------|---------------------------|------|------|------------------------------------------------------------|-------------------------------------------------------------------------------------|
|               |          | Min.                      | Typ. | Max. |                                                            |                                                                                     |
| Lambertian    | Daylight |                           | 3.5  | 3.8  | -3                                                         |                                                                                     |

**Notes:**

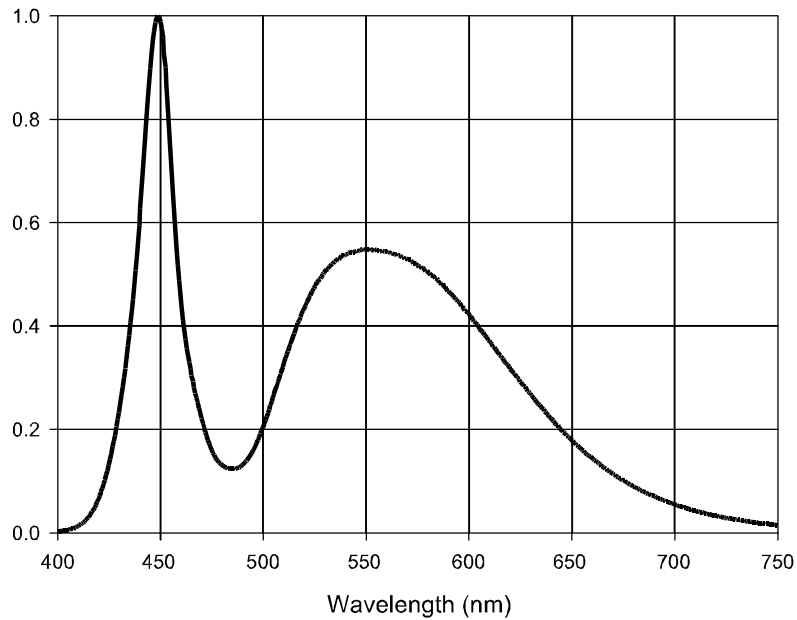
1.  $V_f$  measurement accuracy of 0.1V.

Specific binning requirements- please contact our home office

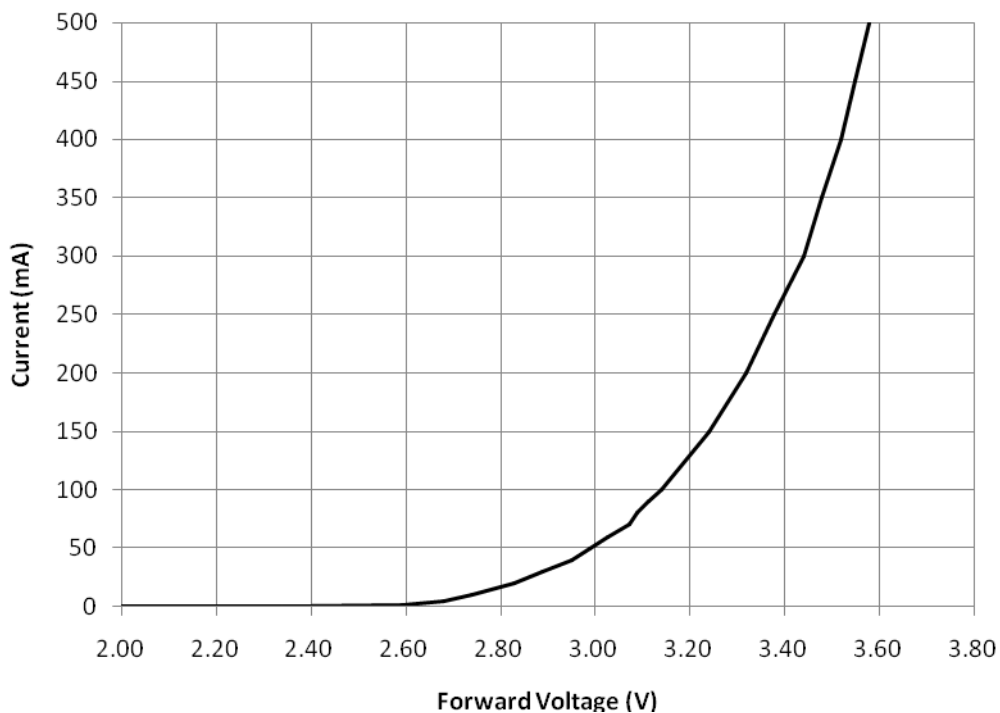


## 4. Wavelength Spectrum, $T_a=25^\circ\text{C}$

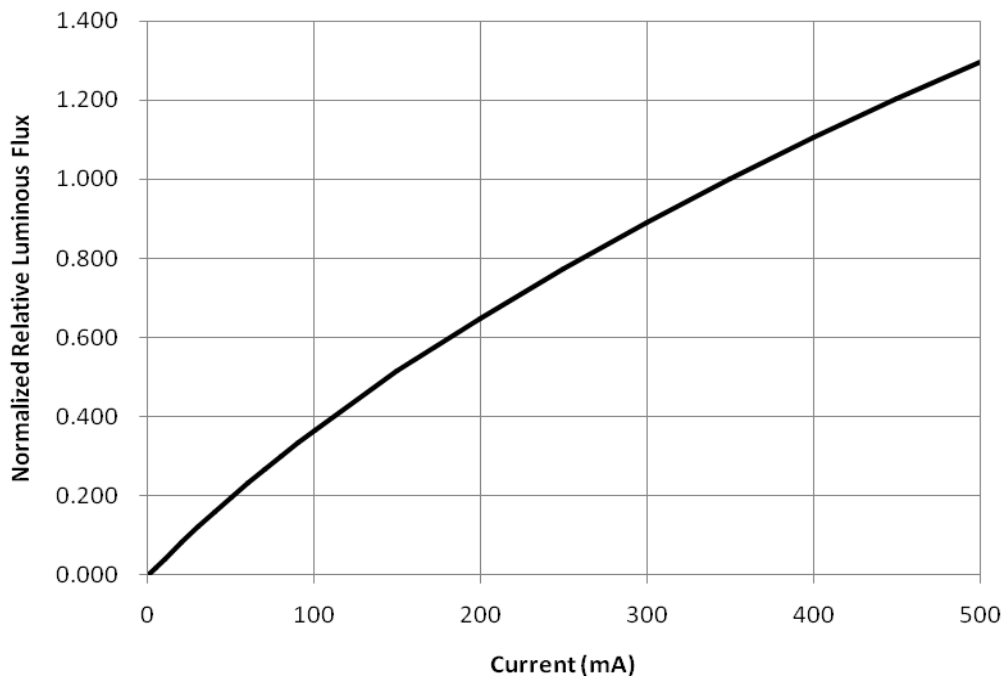
### 4.1 Daylight



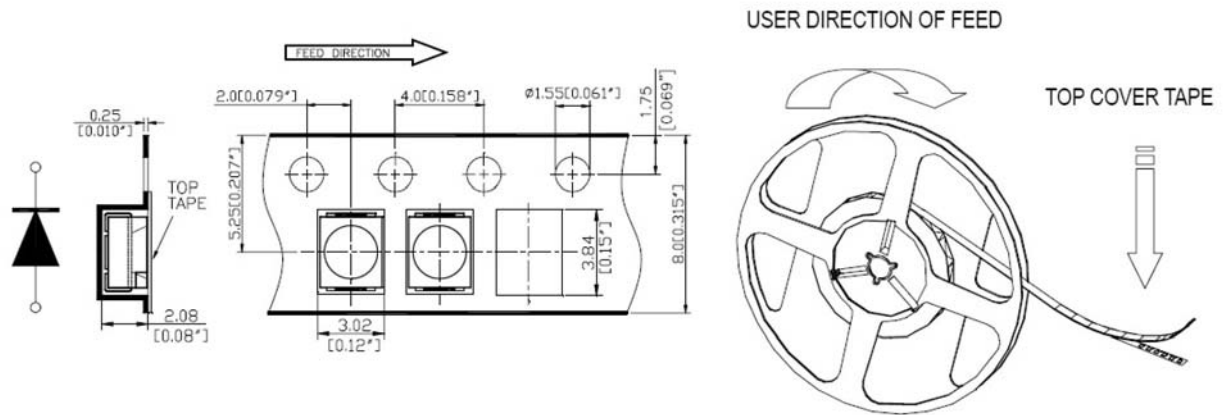
## 5. Forward I-V Characteristics



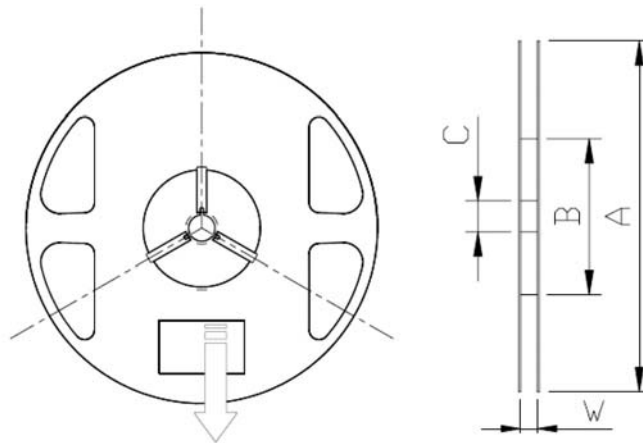
## 6. Forward L-I Characteristics



## 7 Packing Information



|                                                                                        |            |
|----------------------------------------------------------------------------------------|------------|
| Dimensions per ANSI/EIA Standard RS-481<br>All dimensions are in Millimeters (inches). |            |
| A                                                                                      | 180[7.09]  |
| B                                                                                      | 60[2.36]   |
| C                                                                                      | 13.5[0.53] |
| W                                                                                      | 8.4[0.33]  |
| Thickness of top cover tape<br>0.1[0.004] MAX                                          |            |



1. The cathodes is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.
2. 2000pcs/Reel