

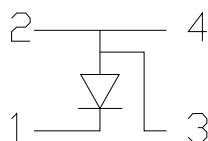
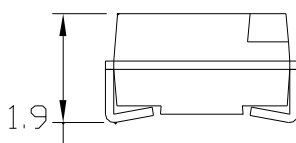
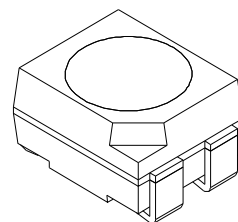
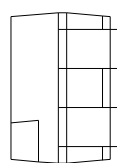
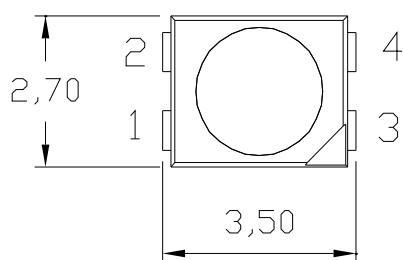
**Features:**

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

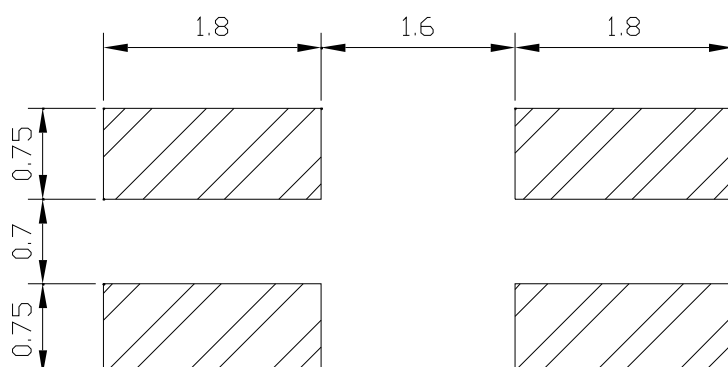
## 1. Mechanical Dimensions



**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 | Minimum           | Typical           | Light Pattern |
|----------|-------------|-------------------|-------------------|---------------|
|          |             | Luminous Flux(lm) | Luminous Flux(lm) |               |
| 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    | Dominant Wavelength $\lambda_d$  |        |        | Spectral              | Temperature                           | Viewing         |
|---------------|----------|----------------------------------|--------|--------|-----------------------|---------------------------------------|-----------------|
|               |          | Peak Wavelength $\lambda_p$ or   |        |        | Half-width            | Coefficient of                        | Angle           |
|               |          | Correlated Color Temperature CCT |        |        | (nm)                  | $\lambda_d$ (nm/ $^{\circ}\text{C}$ ) | Degree          |
|               |          | 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 $V_F$ |      |      | Temperature                     | Thermal                                         |
|---------------|----------|-----------------------|------|------|---------------------------------|-------------------------------------------------|
|               |          | (V)                   |      |      | Coefficient of                  | Resistance                                      |
|               |          | Min.                  | Typ. | Max. | $V_F$ (mV/ $^{\circ}\text{C}$ ) | Junction to lead                                |
|               |          |                       |      |      | $\Delta V_F/\Delta T_j$         | ( $^{\circ}\text{C}/\text{W}$ ) $R\theta_{J-L}$ |
| Lambertian    | Daylight |                       | 3.5  | 3.8  | -3                              |                                                 |

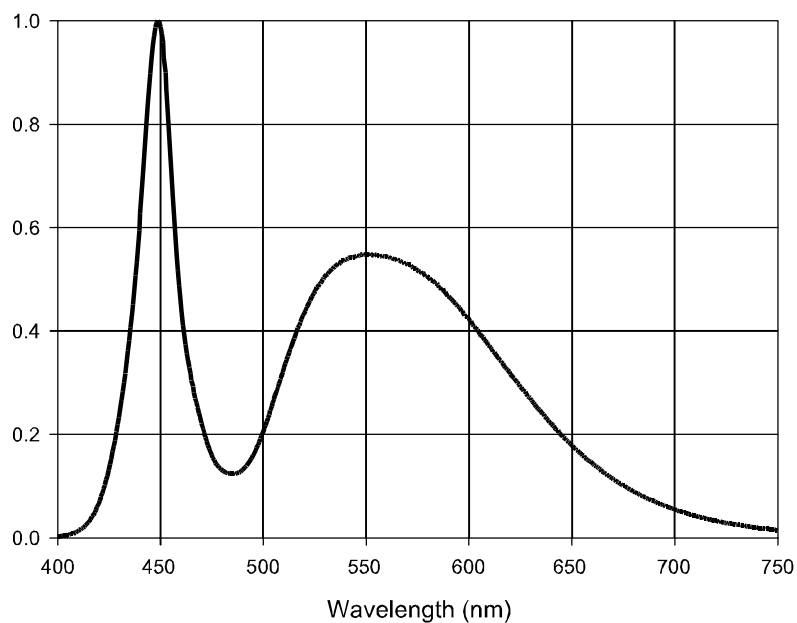
#### Notes:

1.  $V_f$  measurement accuracy of 0.1V.

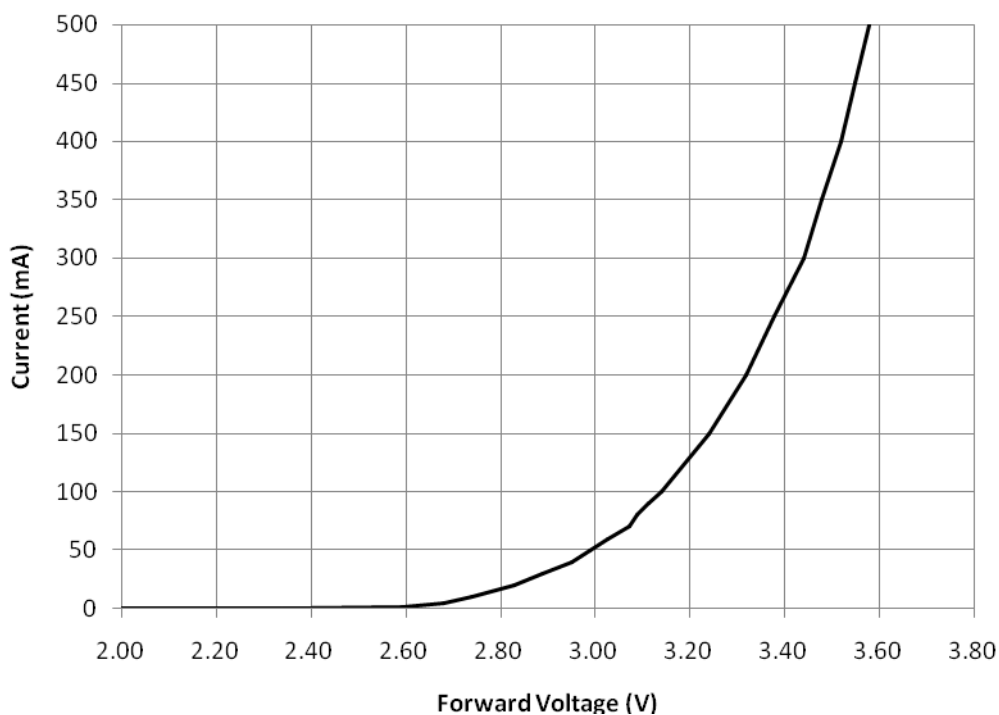
Specific binning requirements- please contact our home office

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

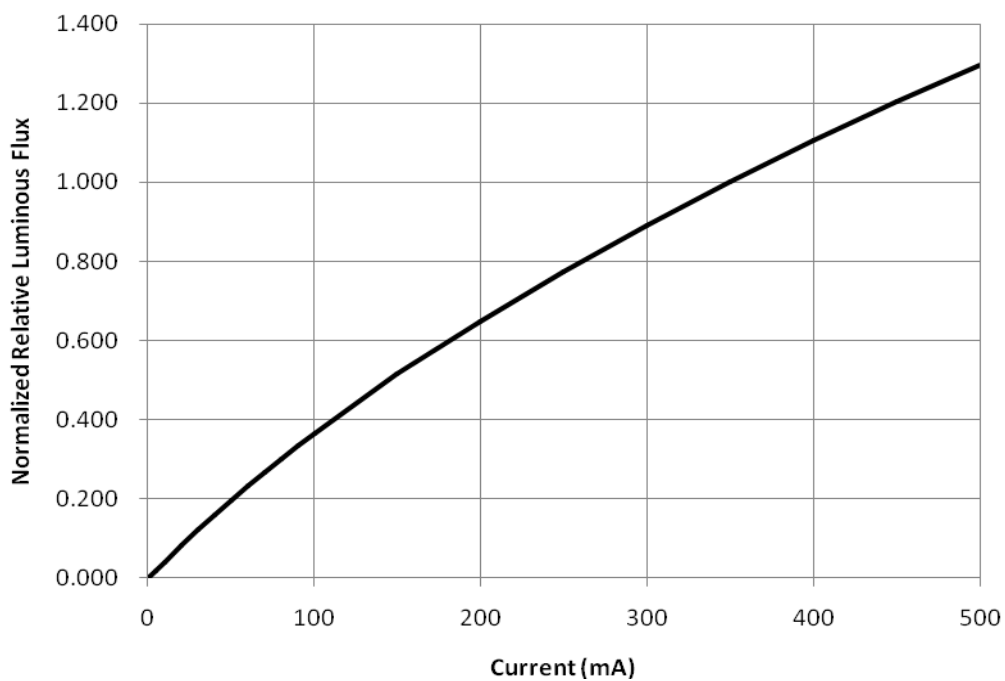
### 4.1 Daylight



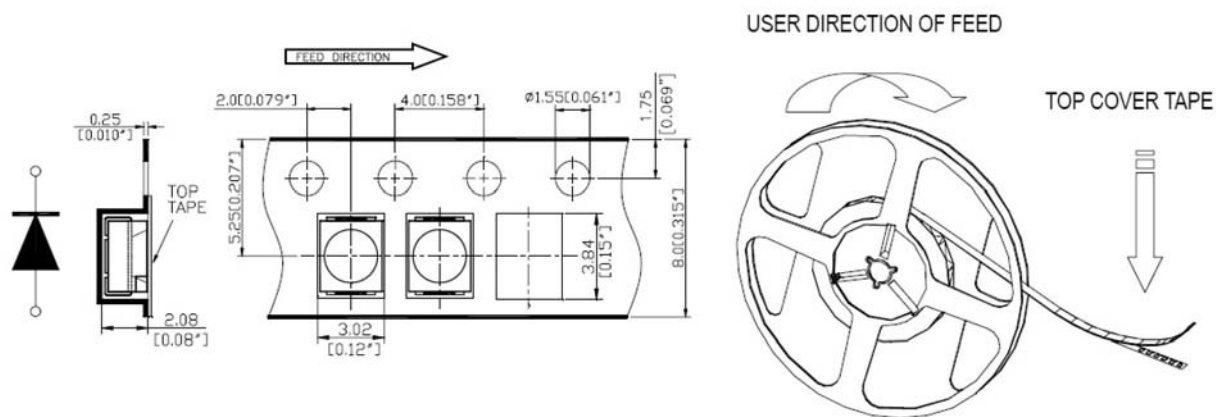
## 5. Forward I-V Characteristics



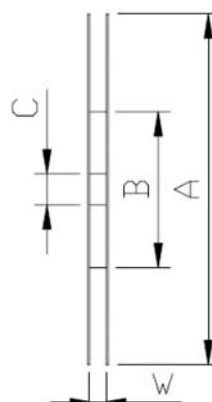
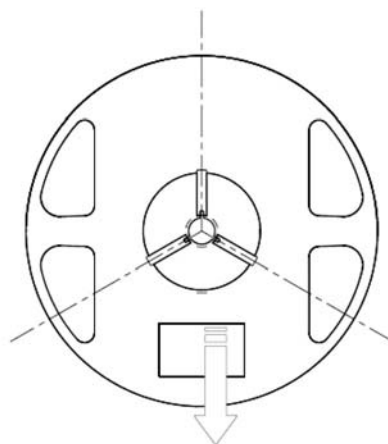
## 6. Forward L-I Characteristics



## 7 Packing Information



|                                                                                              |            |
|----------------------------------------------------------------------------------------------|------------|
| Dimensions per ANSI/EIA<br>Standard RS-481<br>All dimensions are in<br>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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

VCC:

VAOS-SP4W4