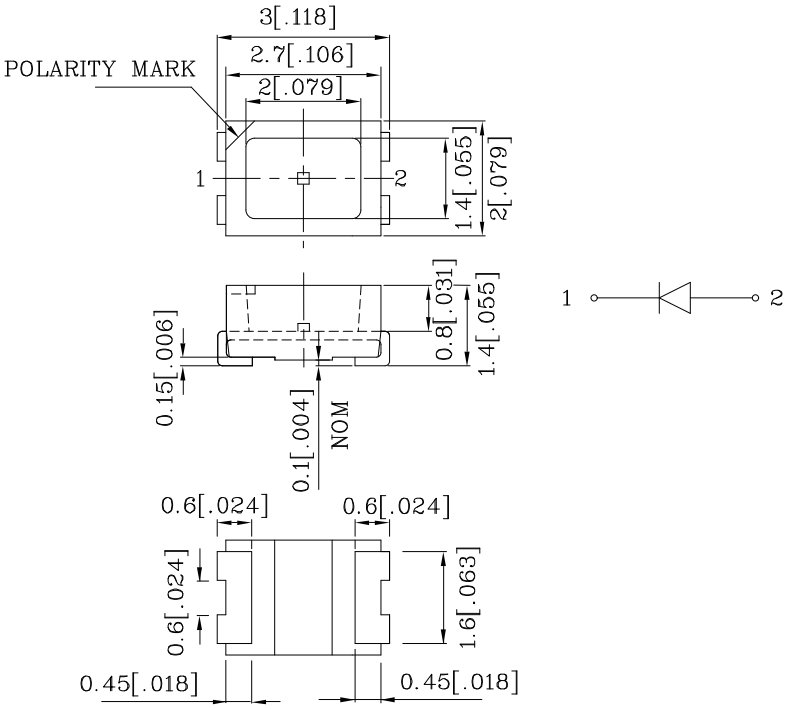
SunLED
www.SunLED.com

**Part Number:** **ZVG50FW**

3.0x2.0mm SURFACE MOUNT LED LAMP

## Features

- 3.0MM X 2.0MM, 1.4MM HIGH, ONLY MINIMUM SPACE REQUIRED.
- SUITABLE FOR COMPACT OPTOELECTRONIC APPLICATIONS.
- LOW POWER CONSUMPTION.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.



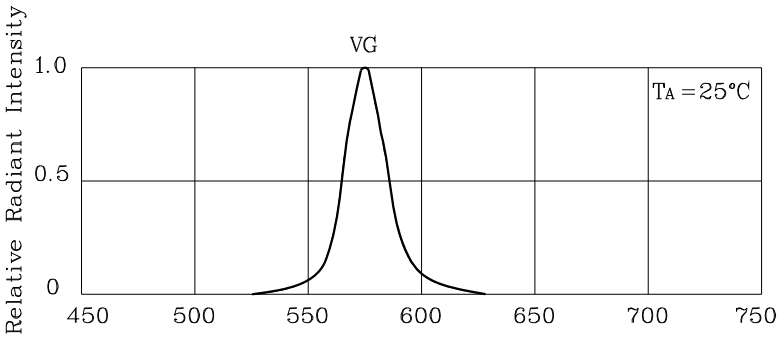

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

| **Absolute Maximum Ratings ($T_A$=25°C)** | | **VG (InGaAlP)** | **Unit** |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 5 | V |
| Forward Current | $I_F$ | 30 | mA |
| Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width | iFS | 150 | mA |
| Power Dissipation | $P_T$ | 75 | mW |
| Operating Temperature | $T_A$ | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | |

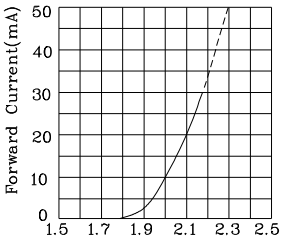
| **Operating Characteristics ($T_A$=25°C)** | | **VG (InGaAlP)** | **Unit** |
|---|---|---|---|
| Forward Voltage (Typ.) ($I_F$=20mA) | $V_F$ | 2.1 | V |
| Forward Voltage (Max.) ($I_F$=20mA) | $V_F$ | 2.5 | V |
| Reverse Current (Max.) ($V_R$=5V) | $I_R$ | 10 | uA |
| Wavelength of Peak Emission (Typ.) ($I_F$=20mA) | λ P | 574 | nm |
| Wavelength of Dominant Emission (Typ.) ($I_F$=20mA) | λ D | 570 | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) ($I_F$=20mA) | Δλ | 20 | nm |
| Capacitance (Typ.) ($V_F$=0V, f=1MHz) | C | 15 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity (IF=20mA) mcd | | Wavelength nm λ P | Viewing Angle 2 θ 1/2 |
|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | | |
| ZVG50FW | Green | InGaAlP | Water Clear | 18 | 59 | 574 | 90° |

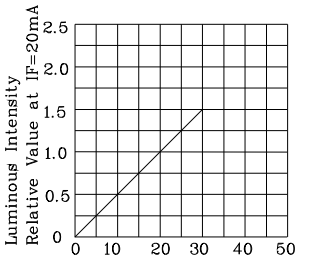



RELATIVE INTENSITY Vs. WAVELENGTH

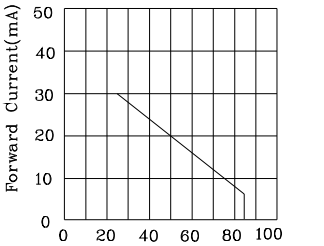
❖ **VG**



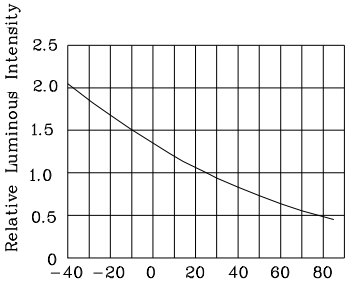

FORWARD CURRENT Vs.
FORWARD VOLTAGE



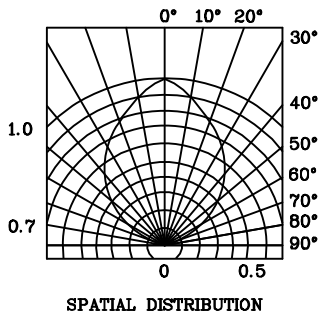

LUMINOUS INTENSITY Vs.
FORWARD CURRENT




FORWARD CURRENT
DERATING CURVE

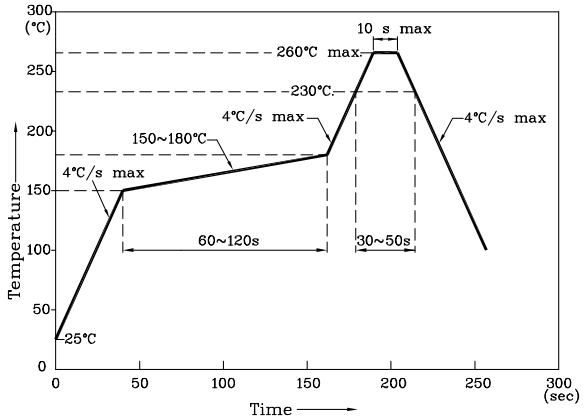



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE




**SPATIAL DISTRIBUTION**

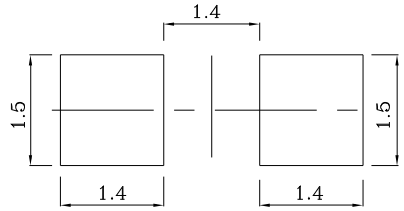
Reflow Soldering Profile For Lead-free SMT Process.



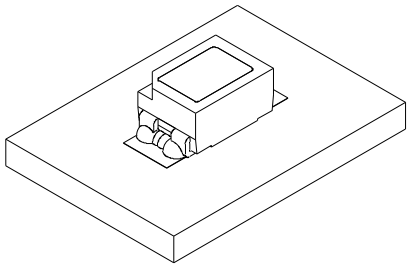

NOTES:

1. Maximum soldering temperature should not exceed 260°c.
2. Recommended reflow temperature: 145°c-260°c.
3. Do not put stress to the epoxy resin during high temperatures conditions.

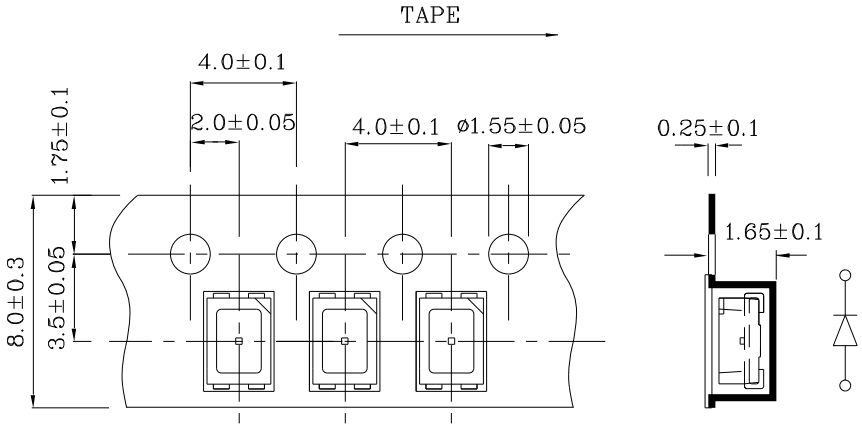
### ❖ Recommended Soldering Pattern (Units : mm; Tolerance:± 0.1)




### ❖ The device has a single mounting surface. The device must be mounted according to the specifications.



### ❖ Tape Specification (Units : mm)




Remarks:

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

## PACKING & LABEL SPECIFICATIONS ZVG50FW

