

PRELIMINARY SPEC

W5A9EGW12.3SF

HIGH EFFICIENCY RED  
GREEN

### Features

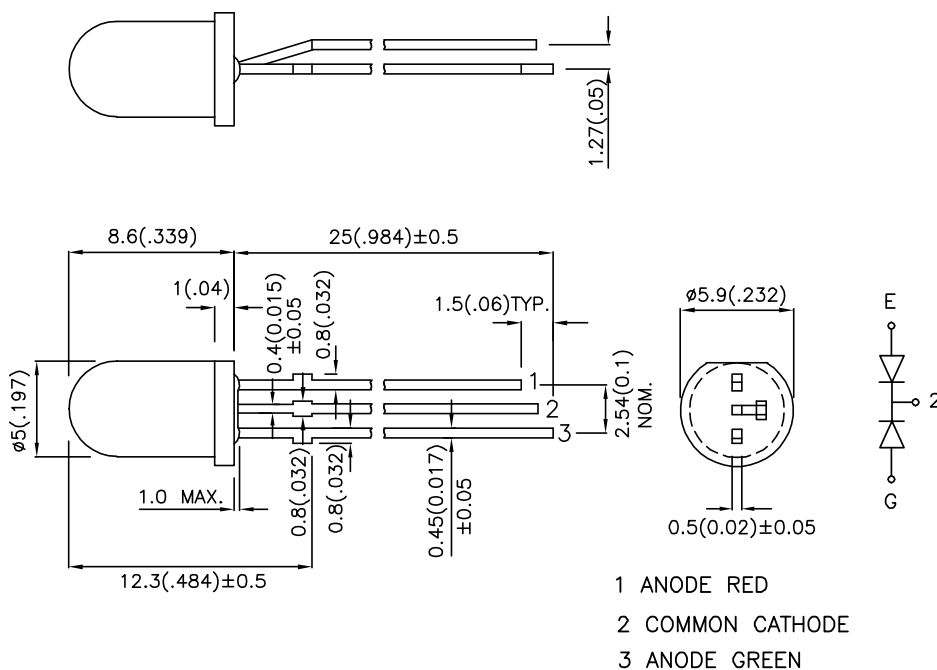
- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- 3 LEADS WITH ONE COMMON LEAD.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

### Description

The High Efficiency Red source color devices are made With Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

## Selection Guide

| Part No.      | Dice                            | Lens Type      | Iv (mcd)<br>@ 20mA |      | Viewing<br>Angle |
|---------------|---------------------------------|----------------|--------------------|------|------------------|
|               |                                 |                | Min.               | Typ. | 2 $\theta$ 1/2   |
| W5A9EGW12.3SF | HIGH EFFICIENCY RED (GaAsP/GaP) | WHITE DIFFUSED | 18                 | 55   | 40°              |
|               | GREEN (GaP)                     |                | 18                 | 55   |                  |

Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at TA=25°C

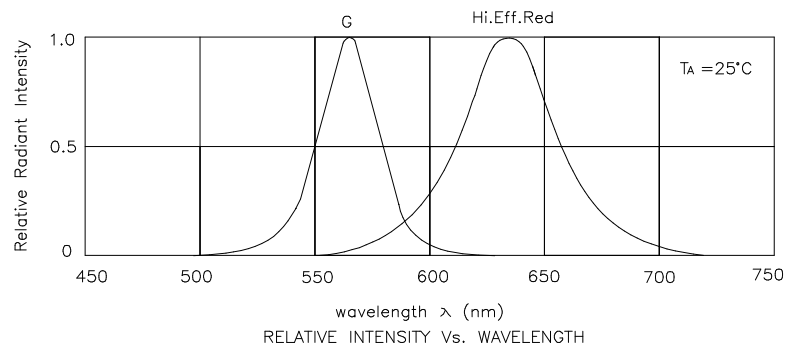
| Symbol                | Parameter                | Device                       | Typ.       | Max.       | Units | Test Conditions           |
|-----------------------|--------------------------|------------------------------|------------|------------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | High Efficiency Red<br>Green | 627<br>565 |            | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$           | Dominant Wavelength      | High Efficiency Red<br>Green | 625<br>568 |            | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | High Efficiency Red<br>Green | 45<br>30   |            | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | High Efficiency Red<br>Green | 15<br>15   |            | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub>        | Forward Voltage          | High Efficiency Red<br>Green | 2.0<br>2.2 | 2.5<br>2.5 | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | All                          |            | 10         | uA    | V <sub>R</sub> = 5V       |

## Absolute Maximum Ratings at TA=25°C

| Parameter                     | High Efficiency Red | Green | Units |
|-------------------------------|---------------------|-------|-------|
| Power dissipation             | 105                 | 105   | mW    |
| DC Forward Current            | 30                  | 25    | mA    |
| Peak Forward Current [1]      | 160                 | 140   | mA    |
| Reverse Voltage               | 5                   | 5     | V     |
| Operating/storage Temperature | -40°C To +85°C      |       |       |
| Lead Solder Temperature [2]   | 260°C For 3 Seconds |       |       |
| Lead Solder Temperature [3]   | 260°C For 5 Seconds |       |       |

Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



## High Efficiency Red / Green

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