

AP23EC/F-F01

HIGH EFFICIENCY RED

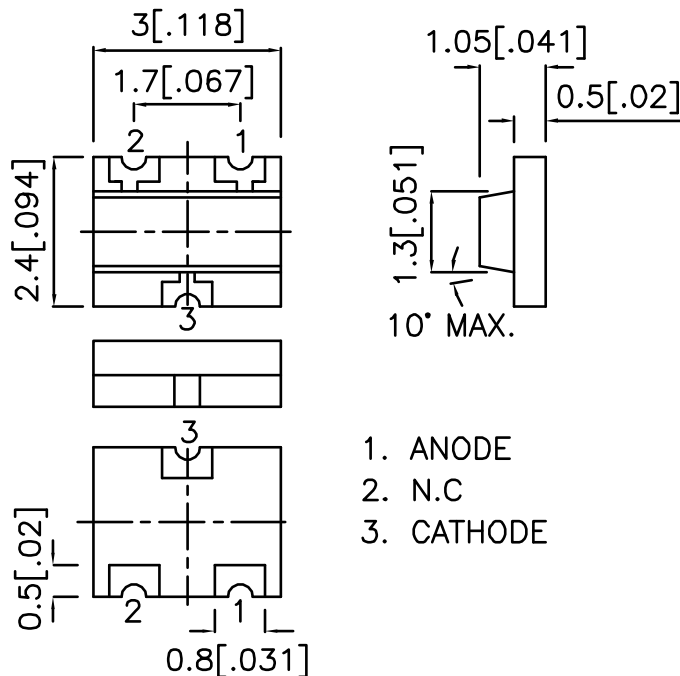
Features

- 3mmx2.4mm SMT LED, 1.05mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 2000PCS / REEL.
- RoHS COMPLIANT.

Description

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

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) @ 20mA | | Viewing Angle |
|--------------|---------------------------------|-------------|--------------------|------|------------------|
| | | | Min. | Typ. | 2 θ 1/2 |
| AP23EC/F-F01 | HIGH EFFICIENCY RED (GaAsP/GaP) | WATER CLEAR | 7 | 20 | 120° |

Note:

1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

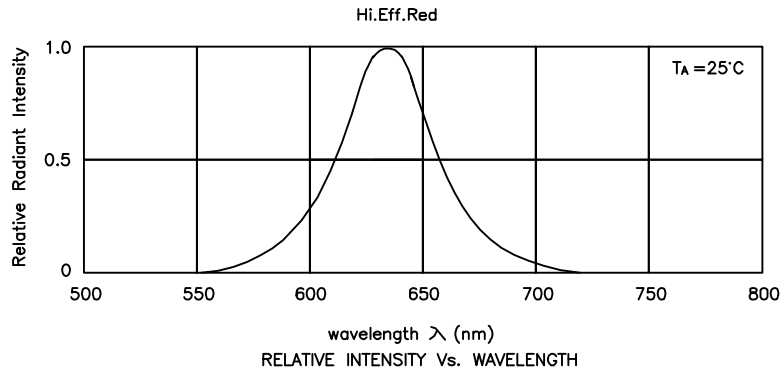
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|---------------------|------|------|-------|---------------------------|
| λ_{peak} | Peak Wavelength | High Efficiency Red | 627 | | nm | I _F =20mA |
| λ_D | Dominant Wavelength | High Efficiency Red | 625 | | nm | I _F =20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | High Efficiency Red | 45 | | nm | I _F =20mA |
| C | Capacitance | High Efficiency Red | 15 | | pF | V _F =0V;f=1MHz |
| V _F | Forward Voltage | High Efficiency Red | 2.0 | 2.5 | V | I _F =20mA |
| I _R | Reverse Current | High Efficiency Red | | 10 | uA | V _R = 5V |

Absolute Maximum Ratings at T_A=25°C

| Parameter | High Efficiency Red | Units |
|---------------------------------|---------------------|-------|
| Power dissipation | 105 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 160 | mA |
| Reverse Voltage | 5 | V |
| Operating / Storage Temperature | -40°C To +85°C | |

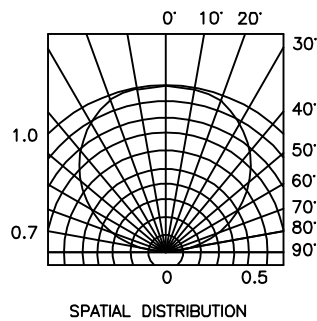
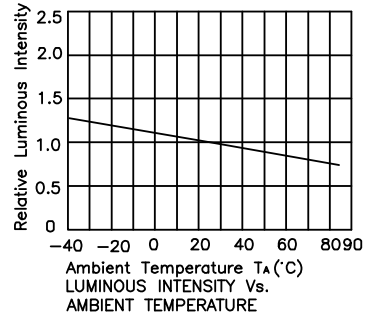
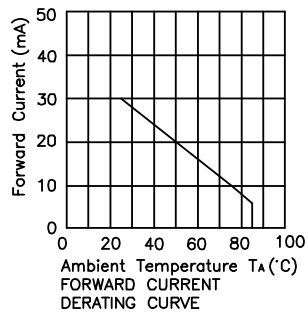
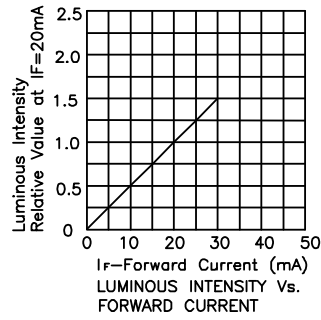
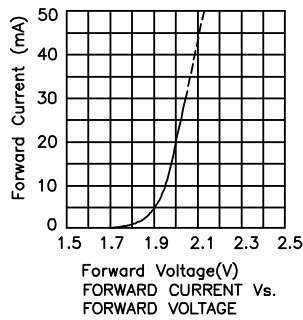
Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



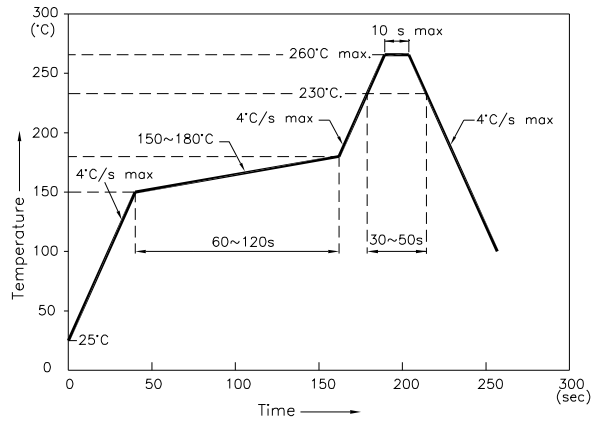
High Efficiency Red

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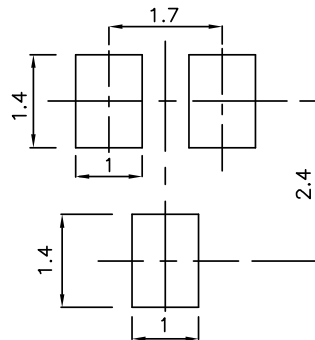
Reflow Soldering Profile For Lead-free SMT Process.



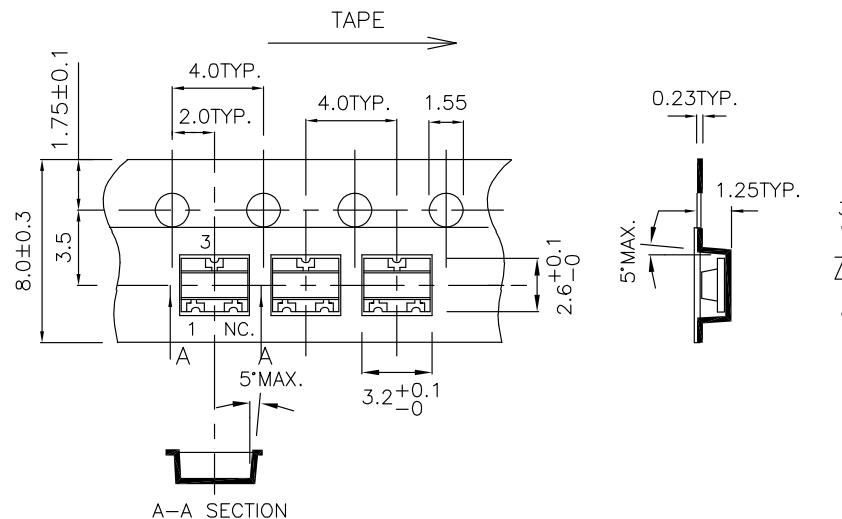
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern (Units : mm)



Tape Specifications (Units : mm)



Remarks:

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

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

Note: Accuracy may depend on the sorting parameters.