

P/N: TBC23-12EGWA

HIGH EFFICIENCY RED  
GREEN

### Features

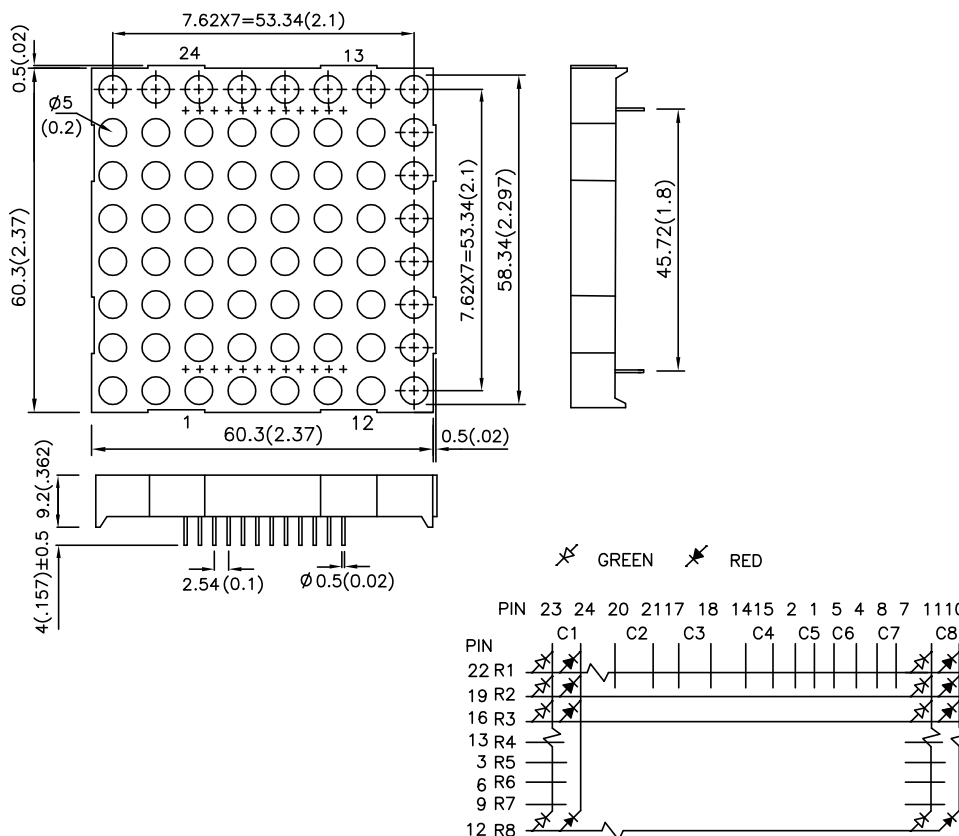
- 2.3 INCH MATRIX HEIGHT.
- DOT SIZE 5mm.
- LOW CURRENT OPERATION.
- HIGH CONTRAST AND LIGHT OUTPUT.
- COMPATIBLE WITH ASCII AND EBCDIC CODES.
- STACKABLE HORIZONTALLY.
- EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- MULTICOLOR AVAILABLE.
- MECHANICALLY RUGGED.
- STANDARD : GRAY FACE, WHITE DOT.
- RoHS 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 & Internal Circuit Diagram



#### Notes:

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
2. Specifications are subject to change without notice.

## Selection Guide

| Part No.     | Dice                            | Lens Type      | Iv (ucd)<br>@ 10mA |       | Description    |
|--------------|---------------------------------|----------------|--------------------|-------|----------------|
|              |                                 |                | Min.               | Typ.  |                |
| TBC23-12EGWA | HIGH EFFICIENCY RED (GaAsP/GaP) | WHITE DIFFUSED | 1900               | 8000  | Column Cathode |
|              | GREEN (GaP)                     |                | 1900               | 10500 |                |

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

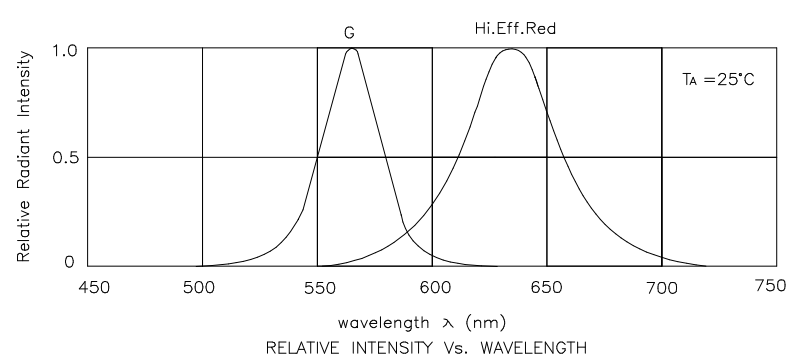
| Symbol                | Parameter                | Device                       | Typ.       | Max.       | Units | Test Conditions |
|-----------------------|--------------------------|------------------------------|------------|------------|-------|-----------------|
| $\lambda_{peak}$      | Peak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

## Absolute Maximum Ratings at TA=25°C

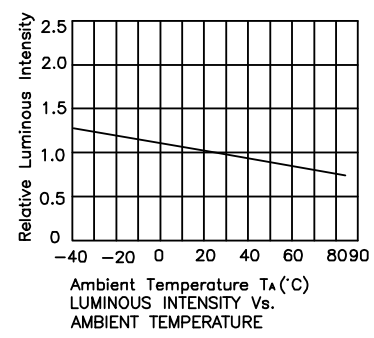
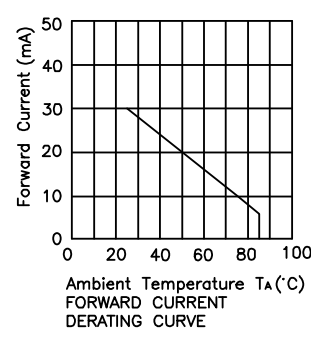
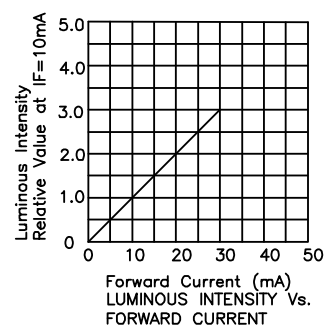
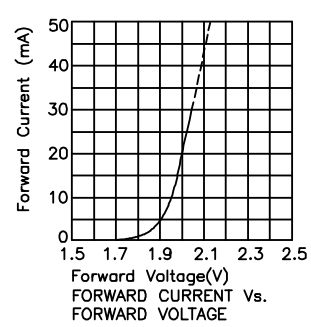
| Parameter                     | High Efficiency Red | Green | Units |
|-------------------------------|---------------------|-------|-------|
| Power dissipation             | 105                 | 105   | mW    |
| DC Forward Current            | 30                  | 25    | mA    |
| Peak Forward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

Notes:

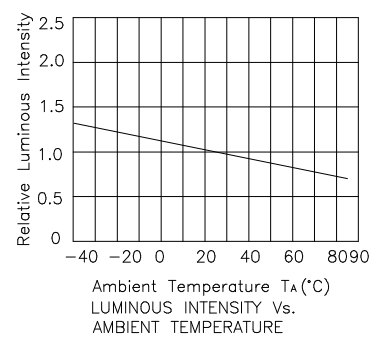
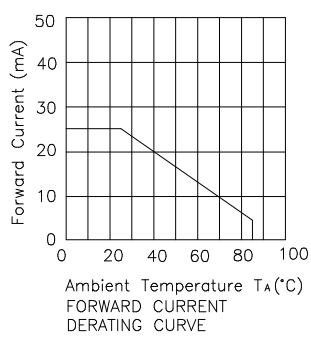
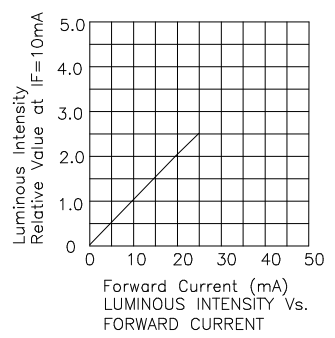
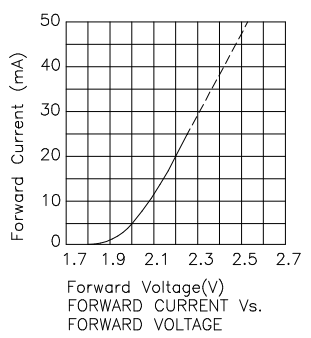
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.



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High Efficiency Red

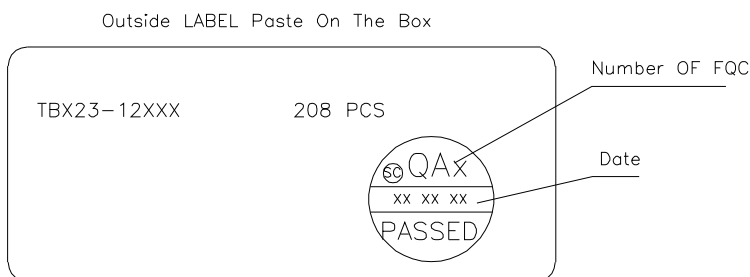
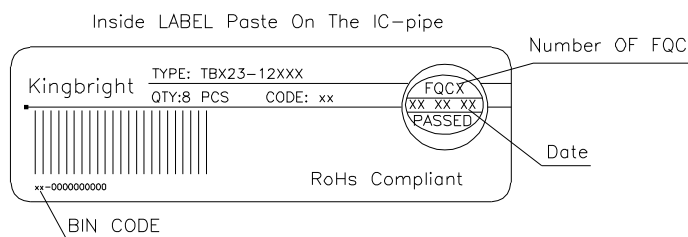
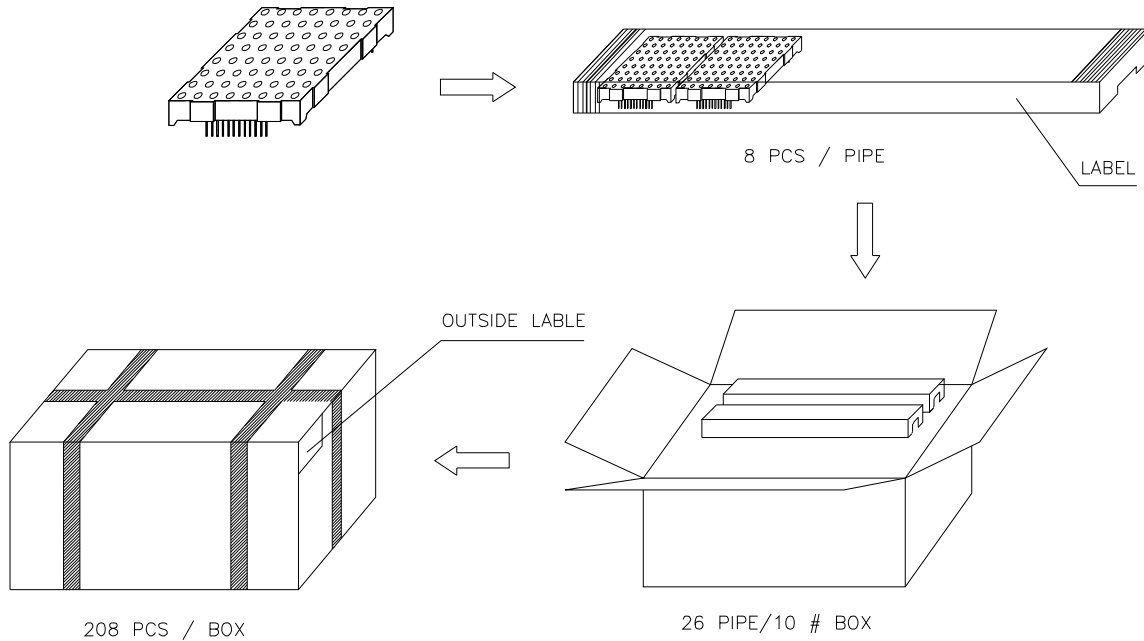


Green



## PACKING & LABEL SPECIFICATIONS

## TBC23-12EGWA



### 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.