

TA16-11EWA/GWA/YWA/SRWA

TC16-11EWA/GWA/YWA/SRWA

Features

- 1.4 INCH MATRIX HEIGHT.
- DOT SIZE 3mm.
- LOW CURRENT OPERATION.
- HIGH CONTRAST AND LIGHT OUTPUT.
- COMPATIBLE WITH ASCII AND EBCDIC CODES.
- STACKABLE HORIZONTALLY AND VERTICALLY.
- COLUMN CATHODE AND COLUMN ANODE AVAILABLE.
- EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- CATEGORIZED FOR LUMINOUS INTENSITY, YELLOW AND GREEN CATEGORIZED FOR COLOR.
- MECHANICALLY RUGGED.
- STANDARD: GRAY FACE, WHITE DOT.

Description

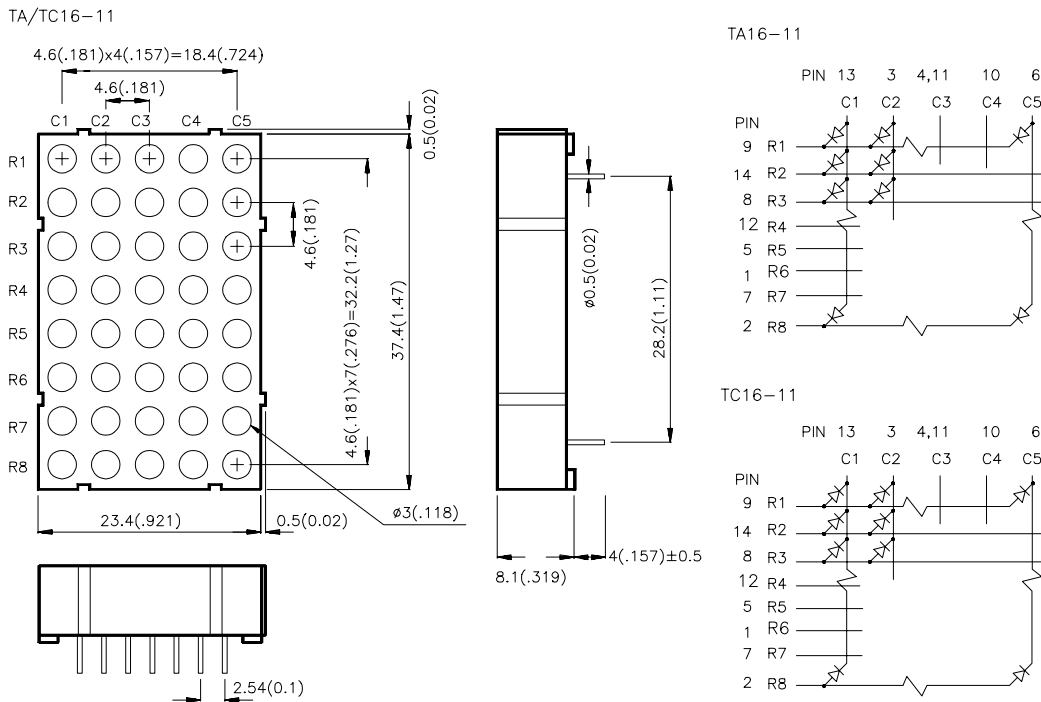
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red 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 | Iv (ucd) @ 10 mA | | Description |
|-------------|---------------------------------|---------------------|-------|----------------|
| | | Min. | Typ. | |
| TA16-11EWA | HIGH EFFICIENCY RED (GaAsP/GaP) | 3000 | 8000 | Column Anode |
| TC16-11EWA | | | | Column Cathode |
| TA16-11GWA | GREEN (GaP) | 4700 | 12000 | Column Anode |
| TC16-11GWA | | | | Column Cathode |
| TA16-11YWA | YELLOW (GaAsP/GaP) | 1900 | 4700 | Column Anode |
| TC16-11YWA | | | | Column Cathode |
| TA16-11SRWA | SUPER BRIGHT RED (GaAlAs) | 8000 | 24000 | Column Anode |
| TC16-11SRWA | | | | Column Cathode |

Electrical / Optical Characteristics at T_A=25°C

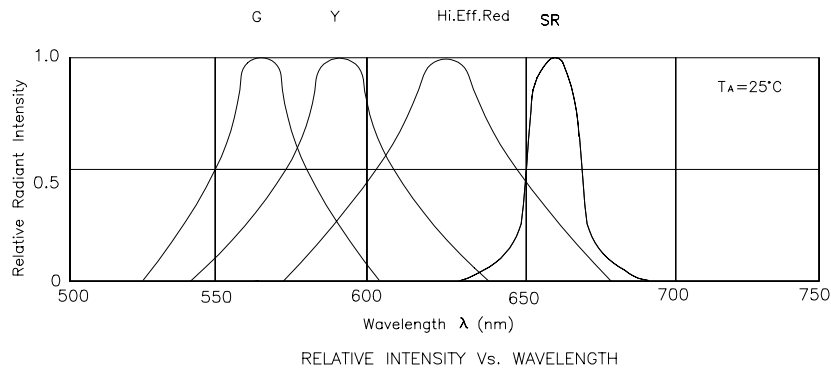
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-----------------------|-------------------------|--|---------------------------|--------------------------|-------|---------------------------|
| λ_{peak} | Peak Wavelength | High Efficiency Red Green Yellow Super Bright Red | 627 565 590 660 | | nm | IF=20mA |
| λ_D | Dominant Wavelength | High Efficiency Red Green Yellow Super Bright Red | 625 568 588 640 | | nm | IF=20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Halfwidth | High Efficiency Red Green Yellow Super Bright Red | 45 30 35 20 | | nm | IF=20mA |
| C | Capacitance | High Efficiency Red Green Yellow Super Bright Red | 15 15 20 45 | | pF | V _F =0V;f=1MHz |
| V _F | Forward Voltage | High Efficiency Red Green Yellow Super Bright Red | 2.0 2.2 2.1 1.85 | 2.5 2.5 2.5 2.5 | V | IF=20mA |
| I _r | Reverse Current | All | | 10 | uA | V _R = 5V |

Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

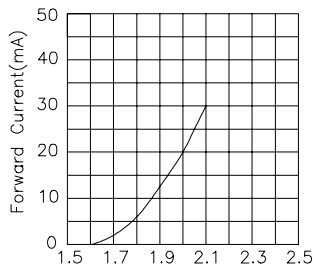
| Parameter | Bright Red | High Efficiency Red | Green | Yellow | Super Bright Red | Units |
|--------------------------------|---------------------|---------------------|-------|--------|------------------|-------|
| Power dissipation | 120 | 105 | 105 | 105 | 100 | mW |
| DC Forward Current | 25 | 30 | 25 | 30 | 30 | mA |
| Peak Forward Current [1] | 150 | 150 | 150 | 150 | 150 | mA |
| Reverse Voltage | 5 | 5 | 5 | 5 | 5 | V |
| Operating/Storage Temperature | -40°C To +85°C | | | | | |
| Lead Soldering Temperature [2] | 260°C For 5 Seconds | | | | | |

Notes:

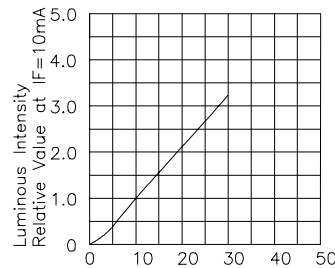
- 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



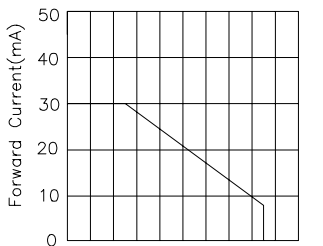
High Efficiency Red



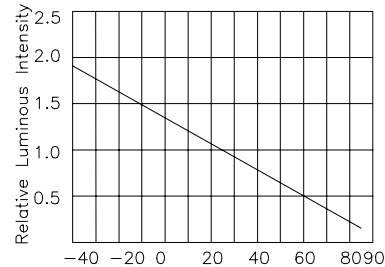
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

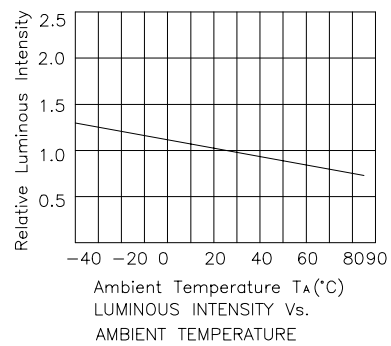
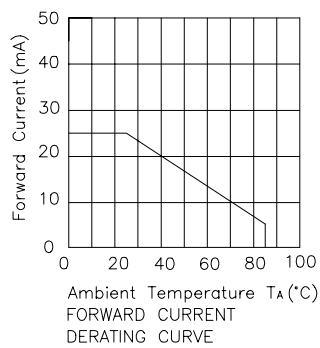
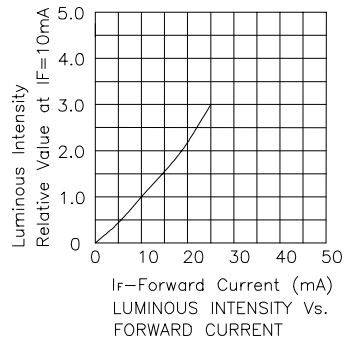
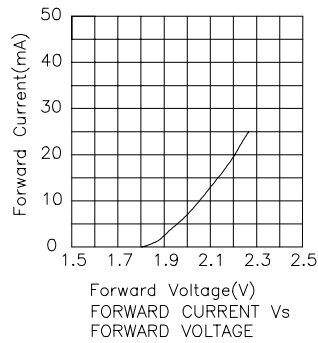


FORWARD CURRENT DERATING CURVE

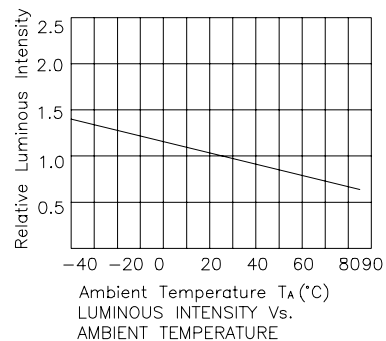
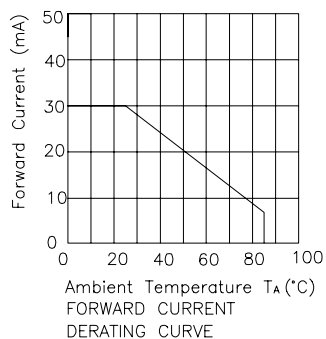
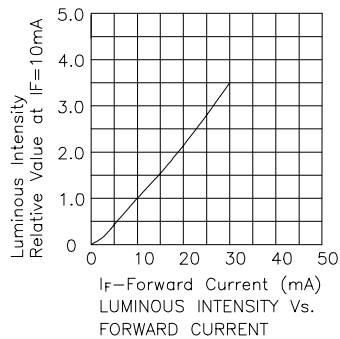
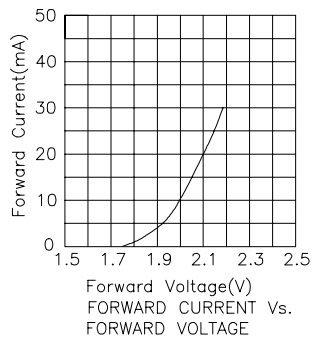


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Green



Yellow



Super Bright Red

