

TA23-11EWA/SRWA/YWA/GWA
 TC23-11EWA/SRWA/YWA/GWA
 TBA23-11EGWA
 TBC23-11EGWA
 TBA23-12EGWA
 TBC23-12EGWA

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.
- COLUMN CATHODE AND COLUMN ANODE AVAILABLE.
- EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- MULTICOLOR AVAILABLE.
- CATEGORIZED FOR LUMINOUS INTENSITY, YELLOW AND GREEN CATEGORIZED FOR COLOR.
- MECHANICALLY RUGGED.
- STANDARD : GRAY FACE, WHITE DOT.

Description

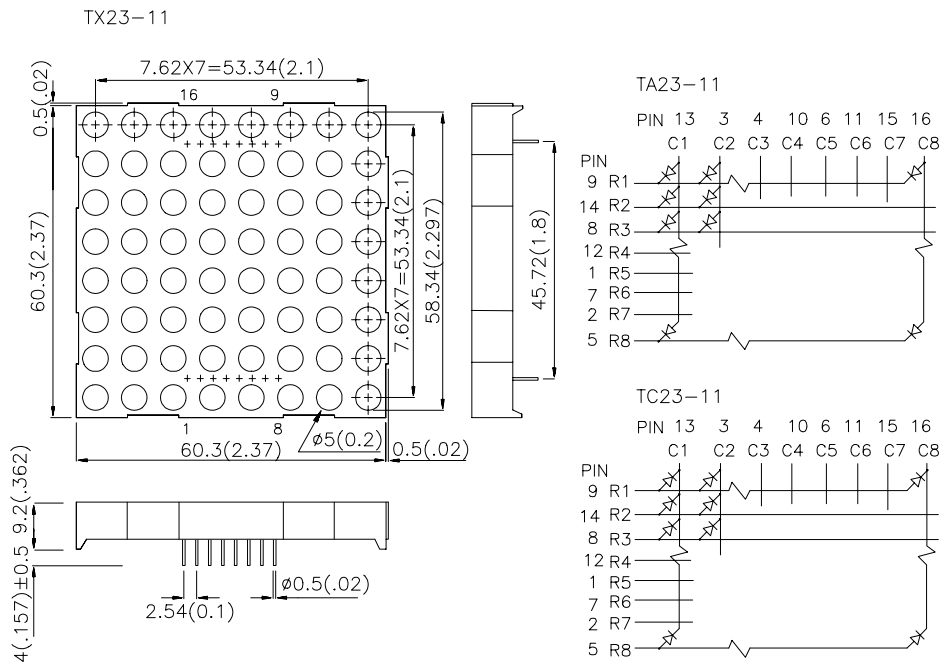
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

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

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

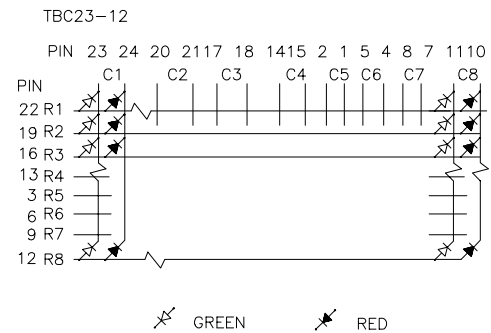
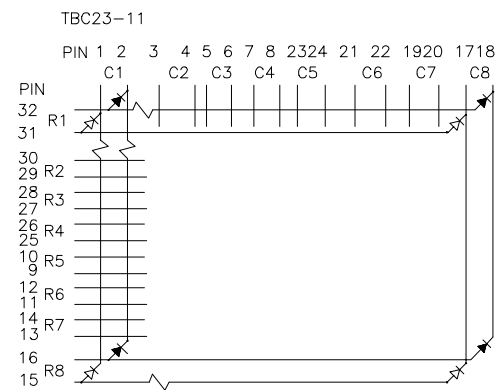
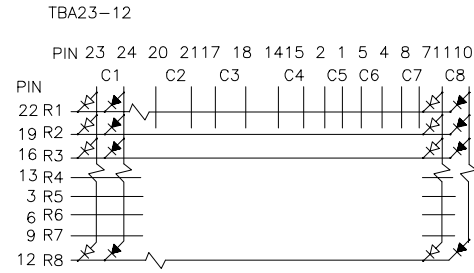
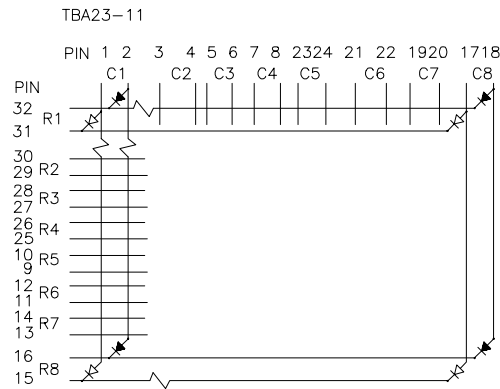
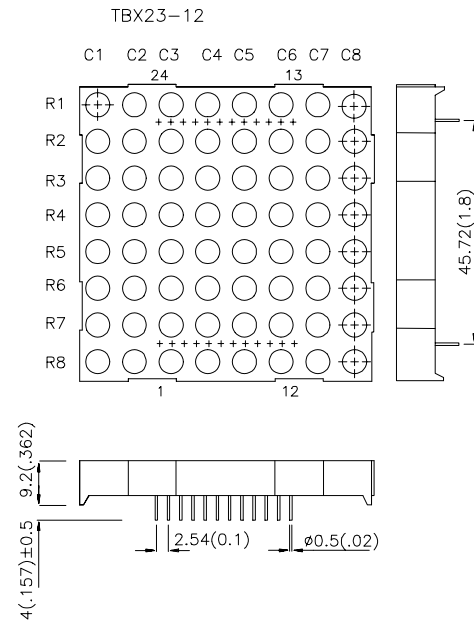
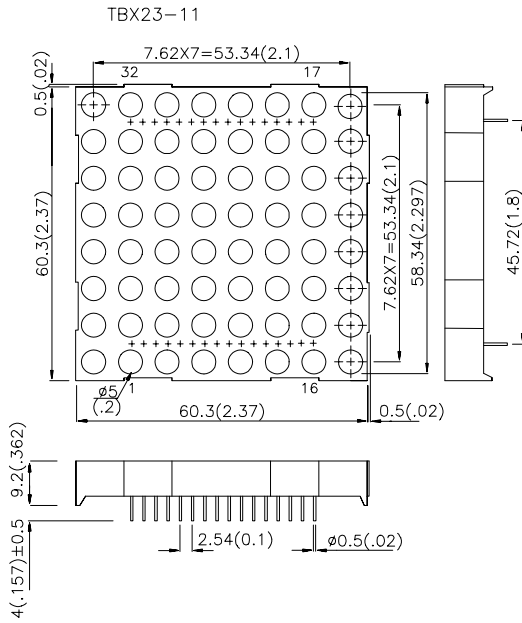
Package Dimensions & Internal Circuit Diagram



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.

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Selection Guide

Part No.	Dice	Lens Type	Iv (ucd) @ 10 mA		Description
			Min.	Typ.	
TA23-11EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	3000	8000	Column Anode
TC23-11EWA					Column Cathode
TA23-11SRWA	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	18000	44000	Column Anode
TC23-11SRWA					Column Cathode
TA23-11YWA	YELLOW (GaAsP/GaP)	WHITE DIFFUSED	3000	8000	Column Anode
TC23-11YWA					Column Cathode
TA23-11GWA	GREEN (GaP)	WHITE DIFFUSED	4700	10500	Column Anode
TC23-11GWA					Column Cathode
TBA23-11EGWA	HIGH EFFICIENCY RED (GaAsP/GaP) GREEN (GaP)	WHITE DIFFUSED	3000	8000	Column Anode
TBC23-11EGWA			4700	10500	Column Cathode
TBA23-12EGWA	HIGH EFFICIENCY RED (GaAsP/GaP) GREEN (GaP)	WHITE DIFFUSED	3000	8000	Column Anode
TBC23-12EGWA			4700	10500	Column Cathode

Electrical / Optical Characteristics at T_A=25°C

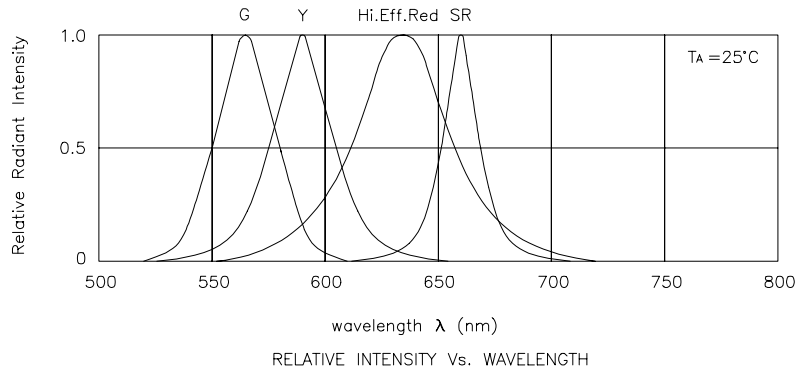
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Super Bright Red Yellow Green	627 660 590 565		nm	I _F =20mA
λ_D	Dominant Wavelength	High Efficiency Red Super Bright Red Yellow Green	625 640 588 568		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line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

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

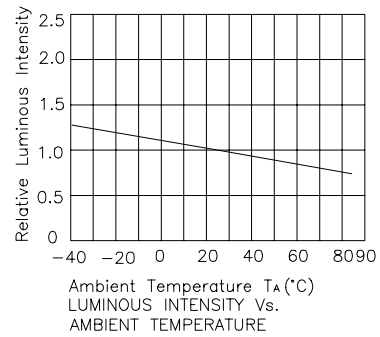
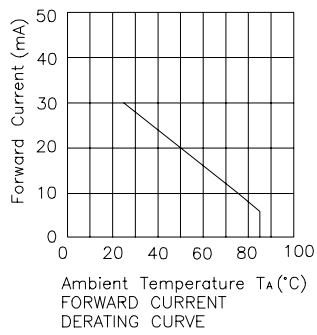
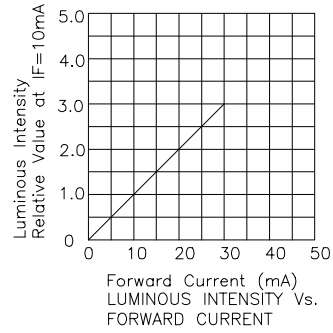
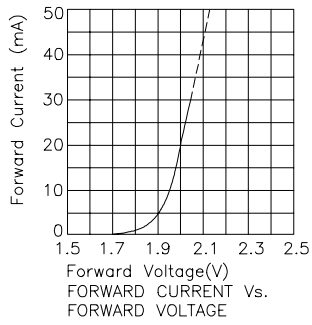
Parameter	High Efficiency Red	Super Bright Red	Yellow	Green	Units
Power dissipation	105	100	105	105	mW
DC Forward Current	30	30	30	25	mA
Peak Forward Current [1]	160	155	140	140	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 5 Seconds				

Notes:

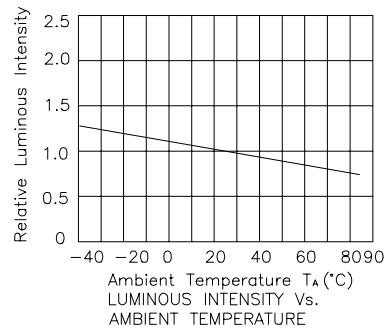
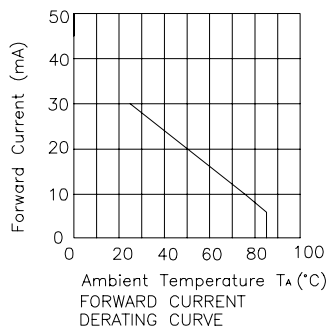
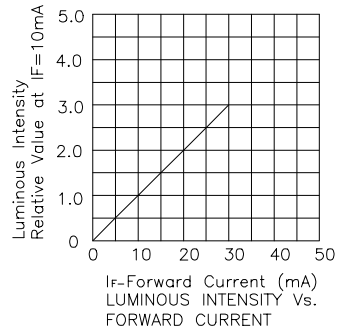
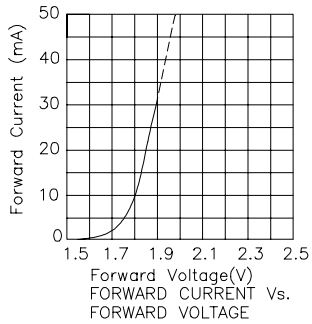
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.



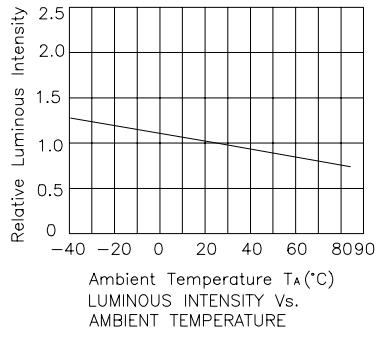
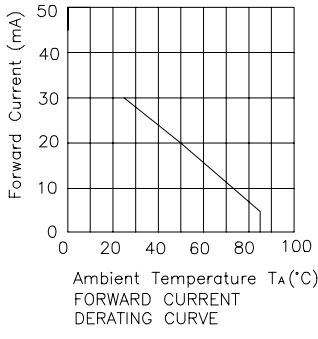
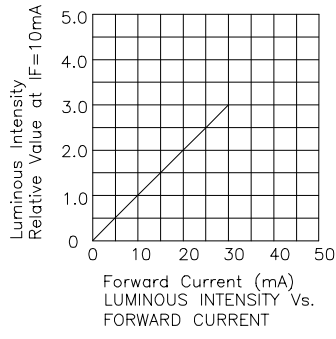
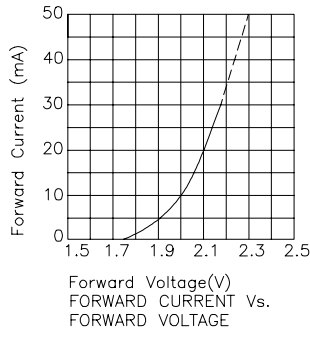
High Efficiency Red



Super Bright Red



Yellow



Green

