

Part Number: TBA40-12SURKCGKWA

Hyper Red  
Green

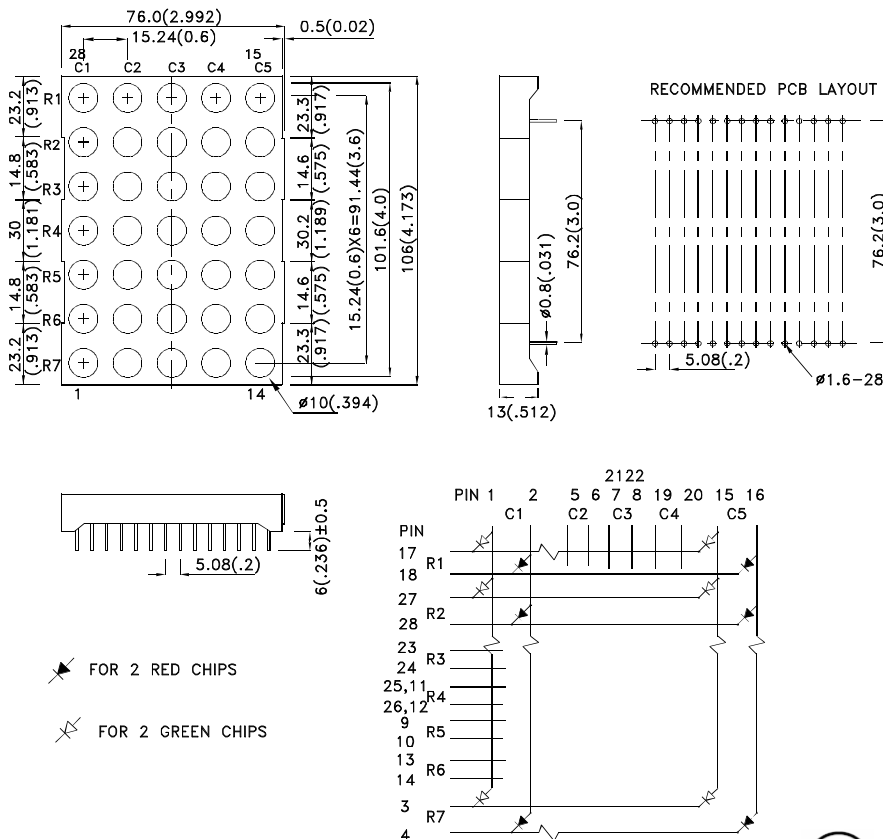
### Features

- 4.0 inch matrix height.
- Dot size 10mm.
- Low current operation.
- High contrast and light output.
- Stackable horizontally.
- Easy mounting on P.C. boards or sockets.
- Multicolor available.
- Mechanically rugged.
- Standard : gray face, white dot.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with Al-GaInP on GaAs substrate Light Emitting Diode.  
The Green source color devices are made with AlGaInP on GaAs substrate 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. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



## Selection Guide

Part No.	Dice	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
TBA40-12SURKCGKWA	Hyper Red (AlGaInP)	White Diffused	88000	240000	Column Anode
	Green (AlGaInP)		52000	140000	

Note:

1. Luminous intensity/ luminous Flux: +/-15%.

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Hyper Red Green	650 574		nm	I <sub>F</sub> =20mA
$\lambda_D$ [1]	Dominant Wavelength	Hyper Red Green	630 570		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red Green	28 20		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red Green	35 15		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage (Per Dot)	Hyper Red Green	3.9 4.2	5.0 5.0	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current (Per Dot)	Hyper Red Green		10	uA	V <sub>R</sub> =5V

Notes:

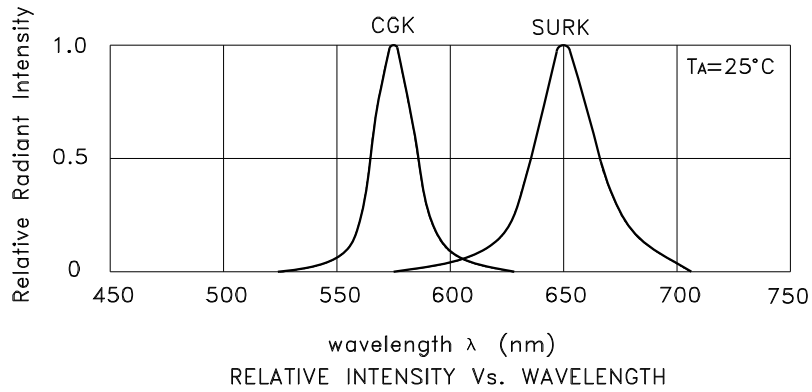
1. Wavelength: +/-1nm.  
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

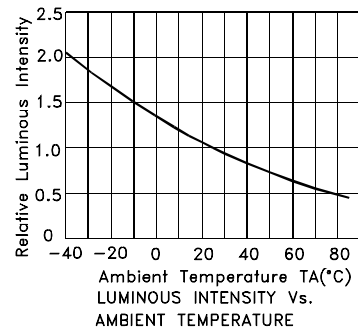
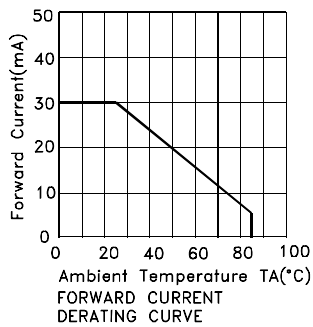
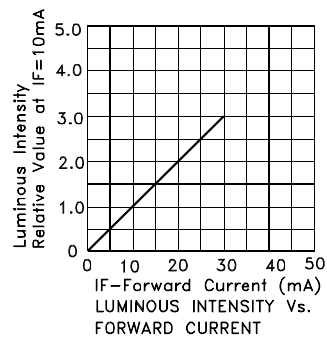
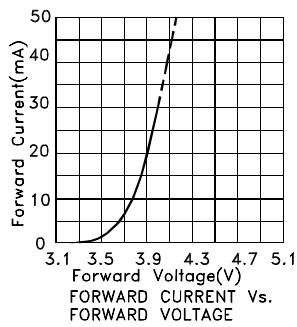
Parameter	Hyper Red	Green	Units
Power dissipation (Per Dot)	150	150	mW
DC Forward Current (Per Dot)	30	30	mA
Peak Forward Current [1] (Per Dot)	185	150	mA
Reverse Voltage (Per Dot)	5		V
Operating/Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 3-5 Seconds		

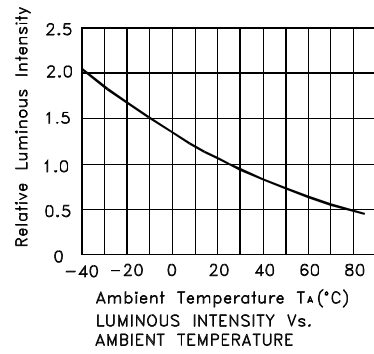
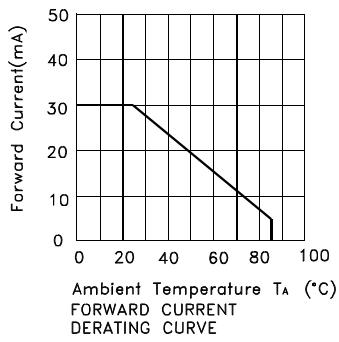
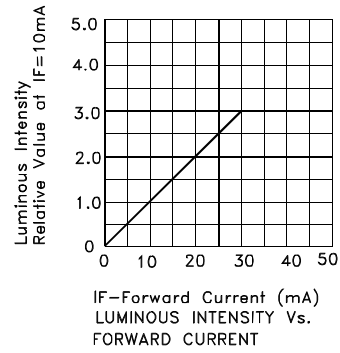
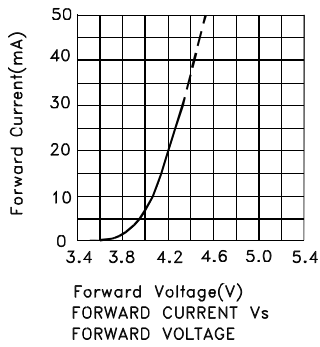
Notes:

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



## TBA40-12SURKCGKWA Hyper Red





**PACKING & LABEL SPECIFICATIONS**

**TBA40-12SURKCGKWA**

