

DD-12HWP BRIGHT RED  
 DD-12GWP GREEN  
 DD-12YWP YELLOW

### Features

- SUITABLE FOR LEVEL INDICATORS.
- LOW CURRENT OPERATION.
- EXCELLENT ON/OFF CONTRAST.
- WIDE VIEWING ANGLE.
- MECHANICALLY RUGGED.
- DIFFERENT COLORS IN ONE UNIT AVAILABLE.
- BLACK FACE, WHITE SEGMENT.

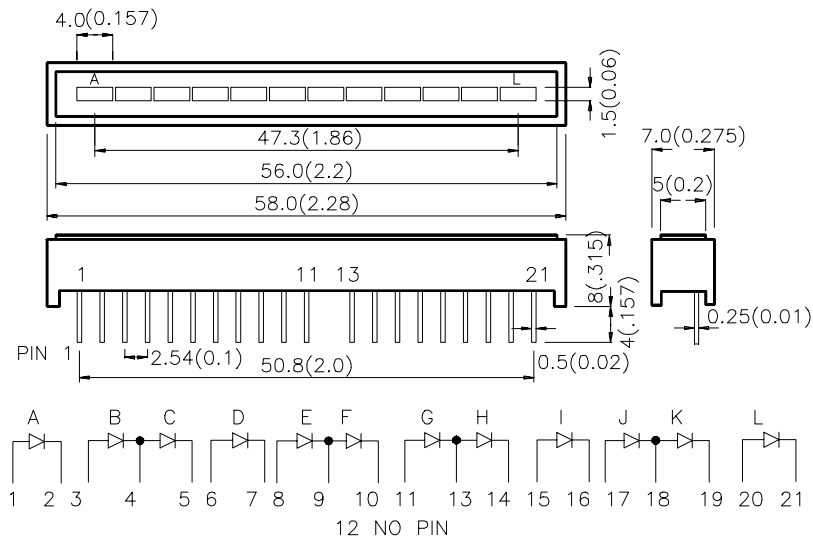
### Description

The Bright Red source color devices are made with Gallium Phosphide Red 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.

### Package Dimensions & Internal Circuit Diagram



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subject to change without notice.

## Selection Guide

Part No.	Dice	I <sub>v</sub> (ucd) @ 10 mA		Description
		Min.	Typ.	
DD-12HWB	BRIGHT RED (GaP)	900	1400	12 Segments Bargraph-Display
DD-12GWB	GREEN (GaP)	2200	5600	
DD-12YWB	YELLOW (GaAsP/GaP)	1400	3600	

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

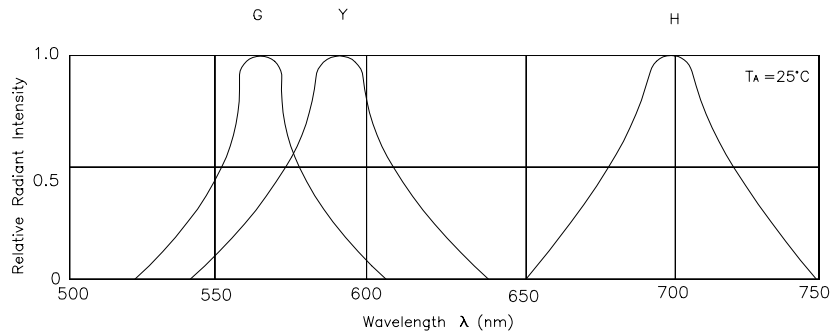
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Bright Red Green Yellow	700 565 590		nm	I <sub>F</sub> =20mA
λ <sub>D</sub>	Dominate Wavelength	Bright Red Green Yellow	660 568 588		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	Bright Red Green Yellow	45 30 35		nm	I <sub>F</sub> =20mA
C	Capacitance	Bright Red Green Yellow	40 15 20		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red Green Yellow	2.25 2.2 2.1	2.5 2.5 2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	All		10	μA	V <sub>R</sub> = 5V

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

Parameter	Bright Red	Green	Yellow	Units
Power dissipation	120	105	105	mW
DC Forward Current	25	25	30	mA
Peak Forward Current [1]	120	140	140	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 5 Seconds			

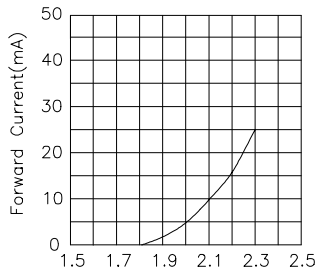
Notes:

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

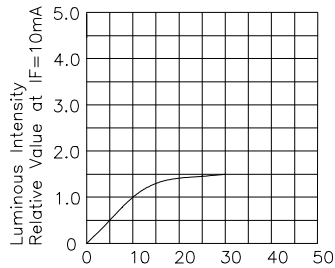


RELATIVE INTENSITY Vs. WAVELENGTH

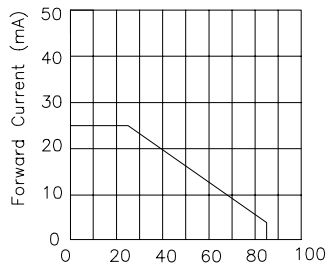
## Bright Red DD-12HWB



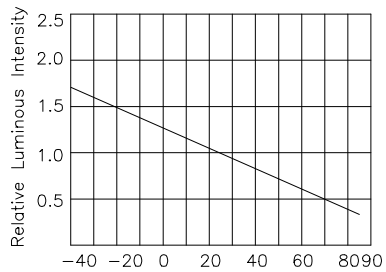
Forward Voltage(V)  
FORWARD CURRENT Vs.  
FORWARD VOLTAGE



$I_f$ —Forward Current (mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT

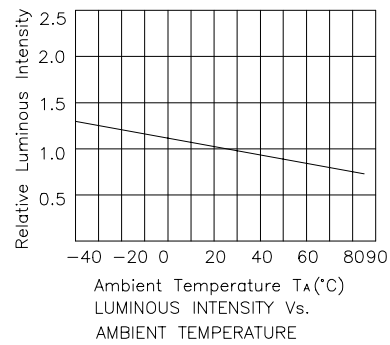
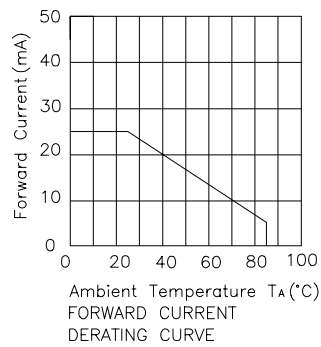
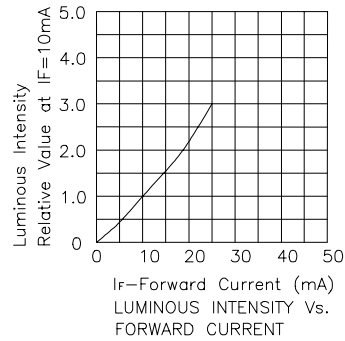
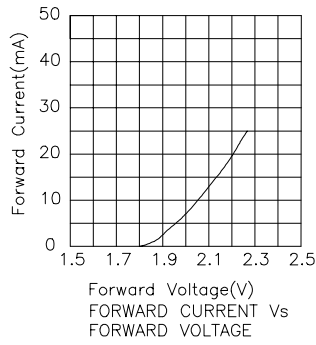


Ambient Temperature  $T_A$  ( $^\circ\text{C}$ )  
FORWARD CURRENT  
DERATING CURVE



Ambient Temperature  $T_A$  ( $^\circ\text{C}$ )  
LUMINOUS INTENSITY Vs.  
AMBIENT TEMPERATURE

## Green DD-12GWB



## Yellow DD-12YWB

