

WP1413HDT

BRIGHT RED

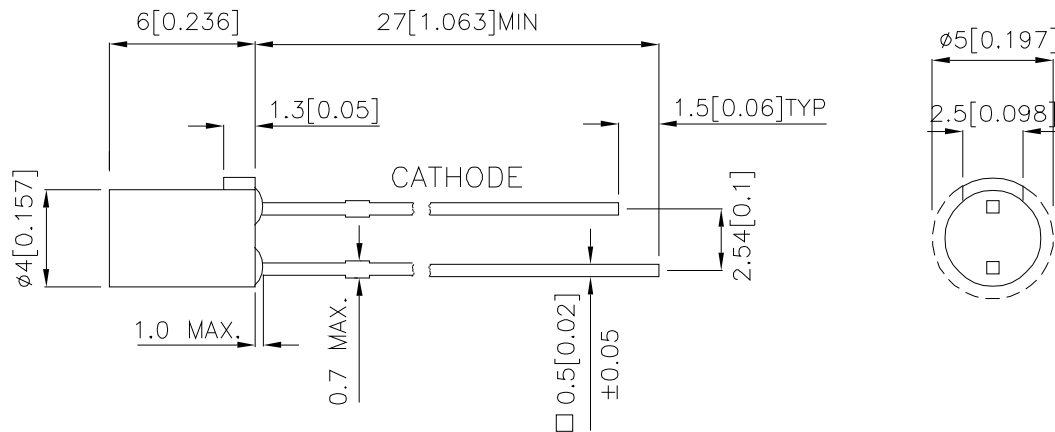
### Features

- CYLINDRICAL TYPE, FLAT TOP.
- CONVEX CATHODE MARK ON BODY.
- LOW POWER CONSUMPTION.
- I.C. COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

### Description

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

### Package Dimensions



#### 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 leads emerge from the package.
4. Specifications are subject to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Typ.	
WP1413HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.3	1	100°

Note:

1.  $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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

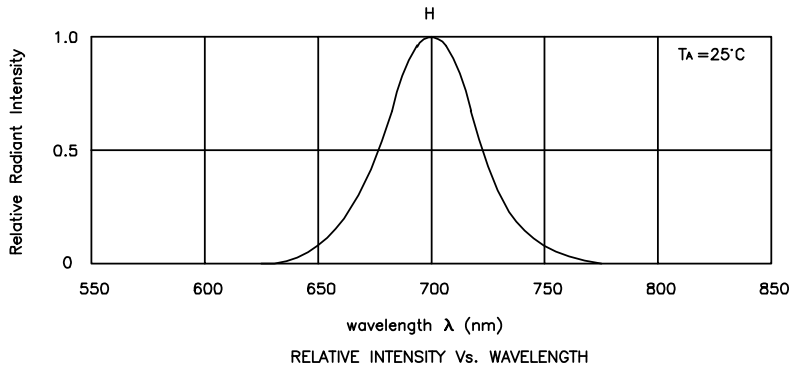
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Bright Red	700		nm	I <sub>F</sub> =20mA
$\lambda_D$	Dominant Wavelength	Bright Red	660		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Bright Red	45		nm	I <sub>F</sub> =20mA
C	Capacitance	Bright Red	40		pF	V <sub>F</sub> =0V; f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red	2.25	2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Bright Red		10	uA	V <sub>R</sub> = 5V

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

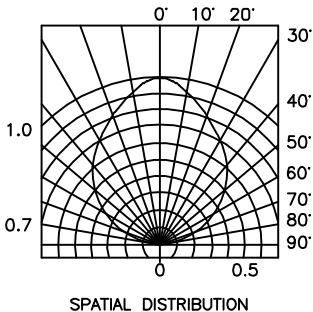
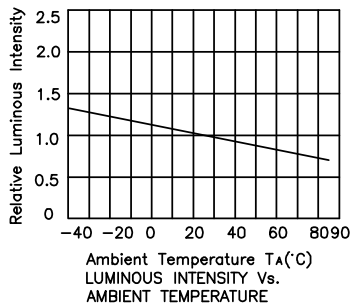
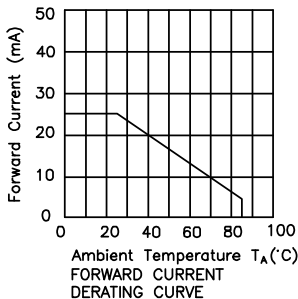
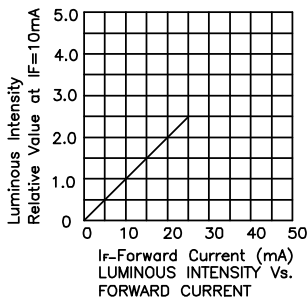
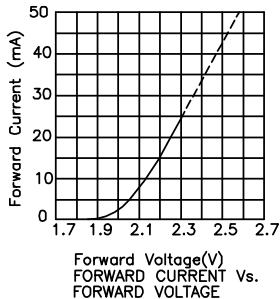
Parameter	Bright Red	Units
Power dissipation	120	mW
DC Forward Current	25	mA
Peak Forward Current [1]	130	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

Notes:

- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2mm below package base.
- 5mm below package base.



Bright Red WP1413HDT



Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity or wavelength), the typical accuracy of the sorting process is as follows:

- 1. Wavelength:  $\pm 1\text{nm}$
- 2. Luminous Intensity:  $\pm 15\%$
- 3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.