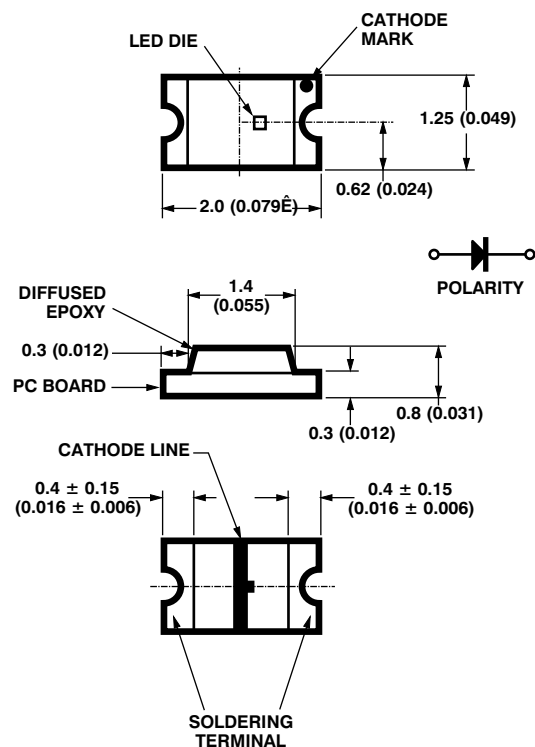


GHB-0805DU-Y  
GHB-0805DU-O  
GHB-0805DU-R  
GHB-0805DU-R2



### Description

These chip-type LEDs utilize Aluminum Indium Gallium Phosphide (AlInGaP) material technology. The AlInGaP material has a very high luminous efficiency, capable of producing high light output over a wide range of drive currents. The available colors in this surface mount series are 592 nm Amber, 605 nm Orange, 626 nm Red for AS AlInGaP and 631 nm red for TS AlInGaP.

## Device Selection Guide

Footprint (mm) <sup>[1,2]</sup>	AS AlInGaP Amber	AS AlInGaP Orange	AS AlInGaP Red	TS AlInGaP Red	Package Description
2.0 x 1.25 x 0.8	GHB-0805DU-Y	GHB-0805DU-O	GHB-0805DU-R	GHB0805DU-R2	Untinted, Diffused

### Notes:

1. Dimensions in mm.

2. Tolerance 0.1 mm unless otherwise noted.

## Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$

Parameter	GHB-0805DU-Y GHB-0805DU-O GHB-0805DU-R	GHB-0805DU-R2	Units
DC Forward Current <sup>[1,2]</sup>	30	30	mA
Power Dissipation	75	81	mW
Reverse Voltage ( $I_R = 100\text{ A}$ )	5	5	V
LED Junction Temperature	95	95	°C
Operating Temperature Range	$\ominus 30$ to $+85$	$\ominus 30$ to $+85$	°C
Storage Temperature Range	$\ominus 40$ to $+85$	$\ominus 40$ to $+85$	°C
Soldering Temperature	See IR soldering profile (Figure 7)		

### Notes:

1. Derate linearly as shown in Figure 4.

2. Drive currents above 5 mA are recommended for best long term performance.

## Electrical Characteristics

$T_A = 25^\circ\text{C}$

Parameter Number	Forward Voltage $V_F$ (Volts) @ $I_F = 20\text{ mA}$		Reverse Breakdown $V_R$ (Volts) @ $I_R = 100\text{ A}$	Capacitance C (pF), $V_F = 0$ , $f = 1\text{ MHz}$	Thermal Resistance $R_{J-PIN} = (^\circ\text{C/W})$
	Typ.	Max.	Min.	Typ.	Typ.
GHB-0805DU-Y	1.9	2.4	5	45	300
GHB-0805DU-O	1.9	2.4	5	45	300
GHB-0805DU-R	1.9	2.4	5	45	300
GHB-0805DU-R2	2.2	2.6	5	35	300

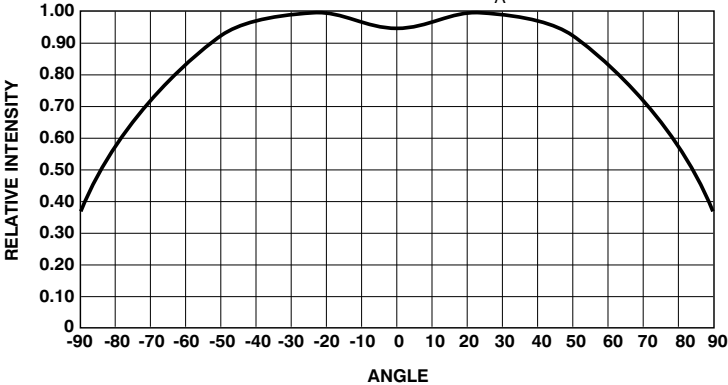
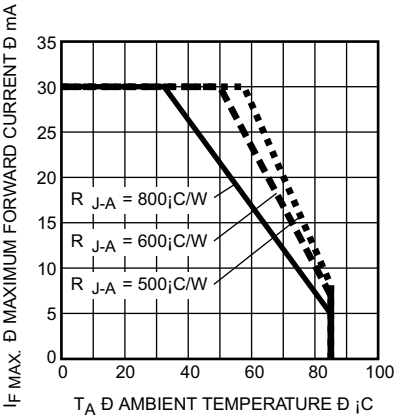
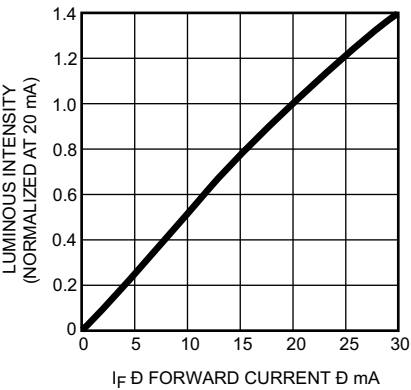
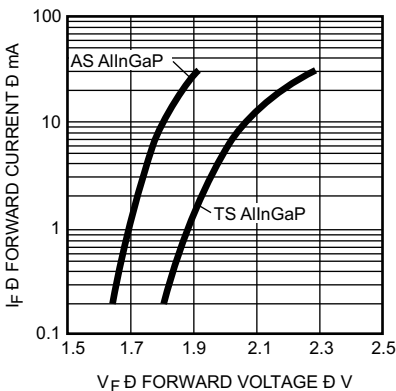
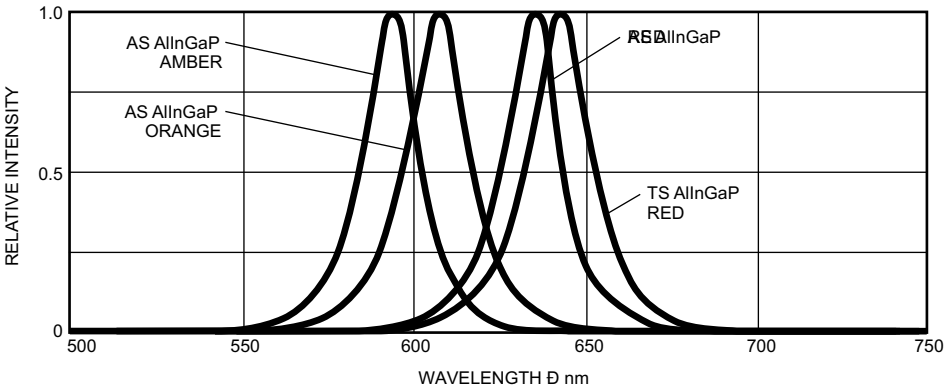
Optical Characteristics

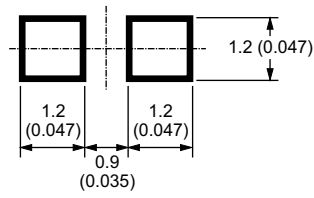
T<sub>A</sub> = 25C

Part Number	Color	Luminous Intensity I <sub>v</sub> (mcd) @ 20 mA <sup>[1]</sup>		Peak Wavelength λ <sub>peak</sub> (nm) Typ.	Color, Dominant Wavelength λ <sub>d</sub> <sup>[2]</sup> (nm) Typ.	Viewing Angle 2 1/2 Degrees <sup>[3]</sup> Typ.	Luminous Efficacy η <sub>v</sub> (lm/w) Typ.
		Min.	Typ.				
GHB-0805DU-Y	AS Amber	25	90	595	592	170	480
GHB-0805DU-O	AS Orange	25	90	609	605	170	370
GHB-0805DU-R	AS Red	25	90	637	626	170	155
GHB-0805DU-R2	TS Red	40	165	643	631	170	122

Notes:

- 1. The luminous intensity, I<sub>v</sub>, is measured at the peak of the spatial radiation pattern which may not be aligned with the mechanical axis of the lamp package.
- 2. The dominant wavelength, λ<sub>d</sub>, is derived from the CIE Chromaticity Diagram and represents the perceived color of the device.
- 3. 1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity.





Recommended soldering pattern for GHB-0805DU-Y/O/R/R2