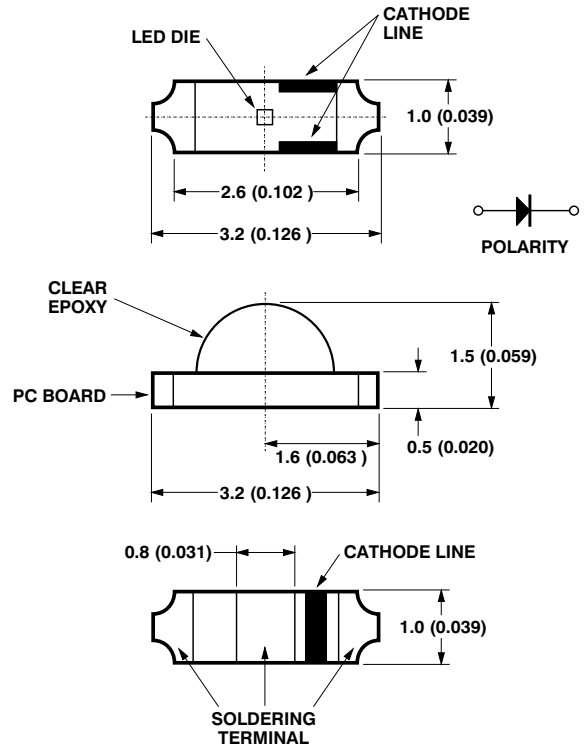


## GHB-RA-B GHB-RA-G

### Description

These small chip-type LEDs utilize high efficient and high brightness InGaN material to deliver competitively priced high performance blue and green. These 520 nm green and 470 nm blue are unique hues which provide color differentiation to a product.

### Package Dimensions



### NOTES:

1. ALL DIMENSIONS IN MILLIMETERS (INCHES).
2. TOLERANCE IS  $\pm 0.1$  mm ( $\pm 0.004$  IN.) UNLESS OTHERWISE SPECIFIED.

## Device Selection Guide

Package Dimension (mm)	InGaN Green	InGaN Blue	Package Description
3.2(L) x 1.0(W) x 1.5(H)	HSMQ-C110	HSMR-C110	Untinted, Non-diffused

Notes: 1. Dimensions in mm. 2. Tolerance ±1 mm unless otherwise noted.

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

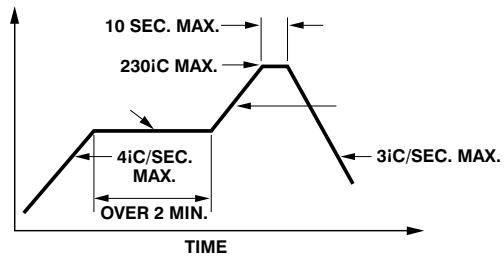
Parameter	GHB-RA-B GHB-RA-G	Units
DC Forward Current	20	mA
Power Dissipation	78	mW
Reverse Voltage (I <sub>R</sub> = 100 A)	5	V
LED Junction Temperature	95	°C
Operating Temperature Range	−30 to +85	°C
Storage Temperature Range	−40 to +85	°C
Soldering Temperature	See reflow soldering profile (Figures 11 & 12)	

Note: 1. Derate linearly as shown in Figure 4.

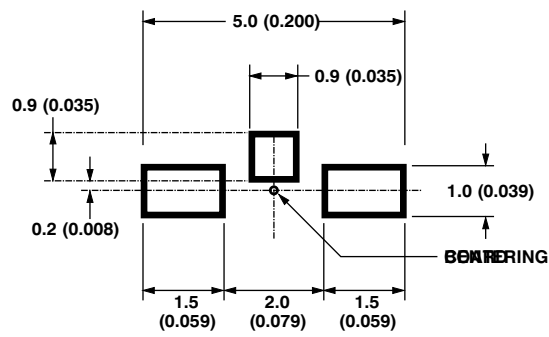
## Electrical Characteristics at T<sub>A</sub> = 25°C

Part Number	Forward Voltage V <sub>F</sub> (Volts) @ I <sub>F</sub> = 20 mA		Reverse Breakdown V <sub>R</sub> (Volts) @ I <sub>R</sub> = 100 A	Capacitance (pF), V = 0, f = 1 MHz	Thermal Resistance R <sub>J-PIN</sub> (C/W)
	Typ.	Max.	Min.	Typ.	Typ.
GHB-RA-B	3.4	3.9	5	140	450
GHB-RA-G	3.4	3.9	5	140	450

V<sub>F</sub> Tolerance: 0.1 V



. Recommended reflow soldering profile.



Recommended soldering pattern.