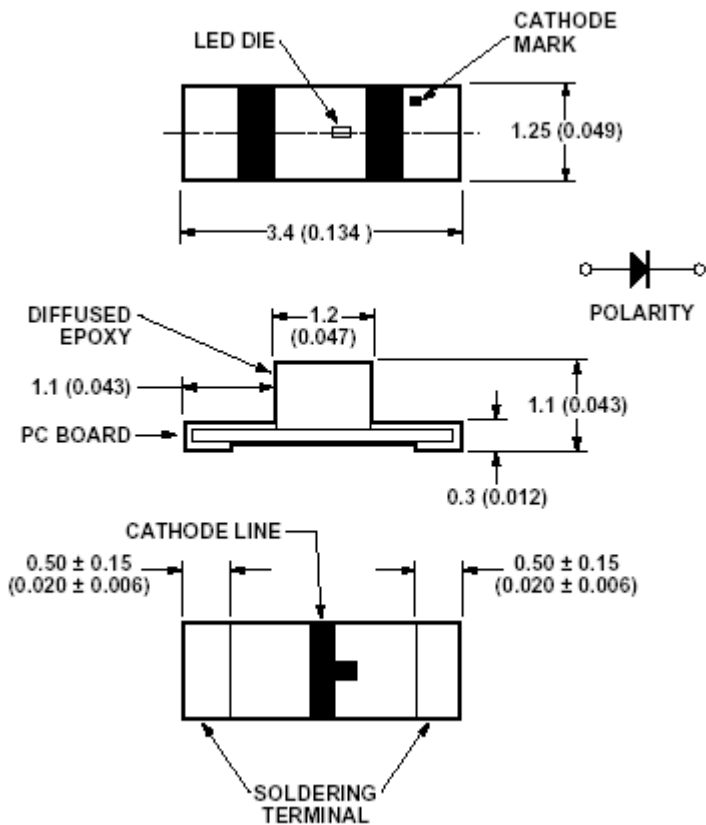


# Preliminary Datasheet Agilent AllnGaP chipLED

## Package Dimensions



HSMX-C265

**Notes:**

1. Dimensions in mm.
2. Tolerance  $\pm 0.1$  mm unless otherwise noted.

### Device Selection Guide

Part Number	Color	Parts Per Reel
HSMA-C265	Amber	3000
HSMC-C265	Red	3000
HSML-C265	Orange	3000
HSMT-C265	Deep Red	3000

**Absolute Maximum Ratings at  $T_A = 25^\circ\text{C}$**

Parameter	HSMA/C/L/T-C265	Units
DC Forward Current	25	mA
Power Dissipation	65	mW
Reverse Voltage ( $I_R = 10\mu\text{A}$ )	5	V
LED Junction Temperature	95	$^\circ\text{C}$
Operating Temperature Range	-30 to +85	$^\circ\text{C}$
Storage Temperature Range	-40 to +85	$^\circ\text{C}$
Soldering Temperature	See soldering profile (Figure 1)	

Reverse Voltage Testing (Tolerance: +/- 30%)

**Electrical Characteristics at  $T_A = 25^\circ\text{C}$**

Part Number	Forward Voltage $V_F$ (Volts) @ $I_F = 20\text{ mA}$		Reverse Breakdown $V_R$ (Volts) @ $I_R = 100\ \mu\text{A}$ Min.
	Typ.	Max.	
HSMA/C/L/T-C265	1.9	2.6	5

**Optical Characteristics at  $T_A = 25^\circ\text{C}$**

Part Number	Luminous Intensity $I_v$ (mcd) @ $20\text{ mA}$ <sup>[1]</sup>		Peak Wavelength $\lambda_{\text{peak}}$ (nm) Typ.	Dominant Wavelength $\lambda_d$ (nm) Typ. <sup>[2]</sup>
	Min.	Typ.		
HSMA-C265	28.5	75	595	592
HSMC-C265	28.5	75	637	626
HSML-C265	28.5	75	609	605
HSMT-C265	11.2	25	660	639

**Notes:**

1. The luminous intensity  $I_v$  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,  $\lambda_d$ , is derived from the CIE Chromaticity Diagram and represents the perceived color of the device.

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## Light Intensity (Iv) Bin Limit<sup>[1]</sup>

Bin ID	Intensity (mcd)	
	Min.	Max.
A	0.11	0.18
B	0.18	0.29
C	0.29	0.45
D	0.45	0.72
E	0.72	1.10
F	1.10	1.80
G	1.80	2.80
H	2.80	4.50
J	4.50	7.20
K	7.20	11.20
L	11.20	18.00
M	18.00	28.50
N	28.50	45.00
P	45.00	71.50
Q	71.50	112.50
R	112.50	180.00
S	180.00	285.00
T	285.00	450.00
U	450.00	715.00
V	715.00	1125.00
W	1125.00	1800.00
X	1800.00	2850.00
Y	2850.00	4500.00

Tolerance:  $\pm 15\%$

**Note:**

- Bin categories are established for classification of products. Products may not be available in all categories. Please contact your Agilent representative for information on currently available bins.

### Amber Color Bin Limits

Bin ID	Dominant Wavelength (nm)	
	Min.	Max.
A	582.0	584.5
B	584.5	587.0
C	587.0	589.5
D	589.5	592.0
E	592.0	594.5
F	594.5	597.0

Tolerance : + / - 1 nm

### Red Color Bin Limits

Bin ID	Dominant Wavelength (nm)	
	Min.	Max.
-	615.0	630.0

Tolerance : + / - 1 nm

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**Orange Color Bin Limits**

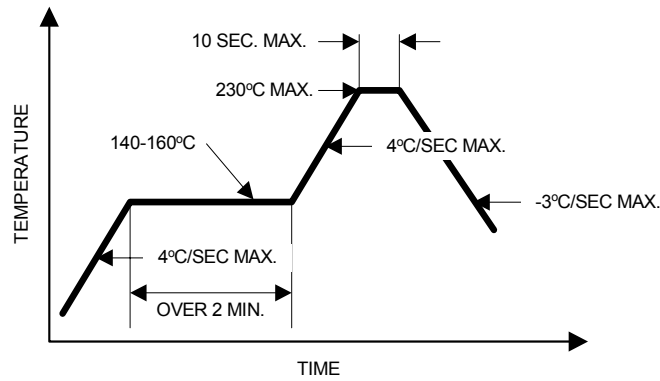
Bin ID	Dominant Wavelength (nm)	
	Min.	Max.
A	597.0	600.0
B	600.0	603.0
C	603.0	606.0
D	606.0	609.0
E	609.0	612.0
F	612.0	615.0

Tolerance : + / - 1 nm

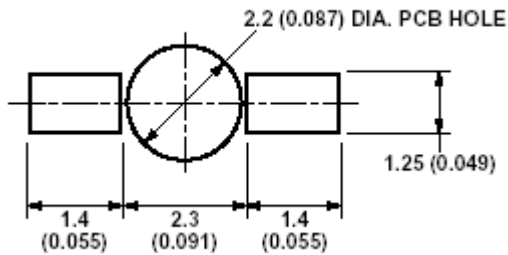
**Deep Red Color Bin Limits**

Bin ID	Dominant Wavelength (nm)	
	Min.	Max.
-	635.0	646.0

Tolerance : + / - 1 nm

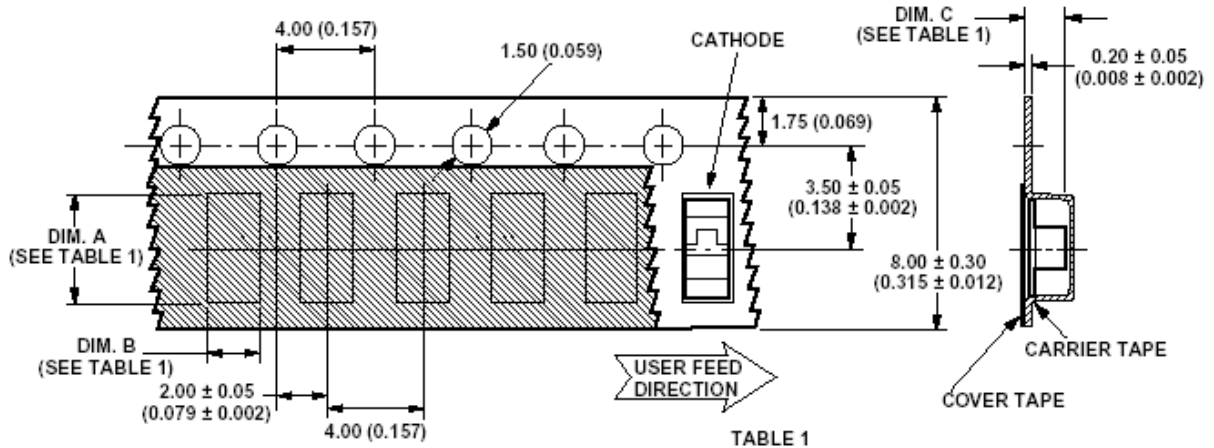


**Figure 1: Recommended Reflow Soldering Profile**



**Figure 2: Recommended Soldering Pattern**

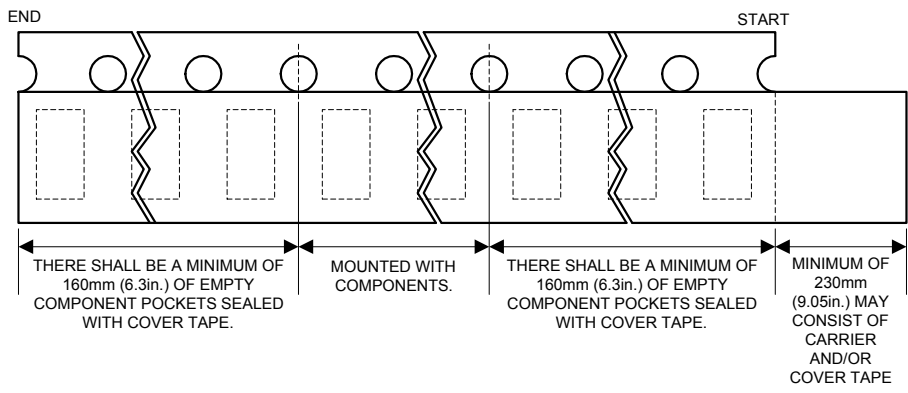
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**TABLE 1**  
**DIMENSIONS IN MILLIMETERS (INCHES)**

PART NUMBER	DIM. A ± 0.10 (0.004)	DIM. B ± 0.10 (0.004)	DIM. C ± 0.10 (0.004)
HSMx-C265 SERIES	3.70 (0.146)	1.45 (0.057)	1.30 (0.051)

Figure 3: Tape Dimensions



**Convective IR Reflow Soldering**

For more information on IR reflow soldering, refer to Application Note 1060, *Surface Mounting SMT LED Indicator Components*.

**Storage Condition : 5 to 30 °C @ 60%RH max.**

Baking is required under the condition :

- a) the blue silica gel indicator becoming white / transparent color
  - b) the pack has been open for more than 1 week
- Baking recommended condition : 60 ± 5 °C for 20 hrs

Figure 4: Tape Leader and Trailer Dimensions.

**Notes:**

- 1. All dimensions in millimeters (inches).
- 2. Tolerance is ± 0.1 mm (± 0.004 in.) unless otherwise specified.

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Data subject to change.

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