



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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HSMF-C145

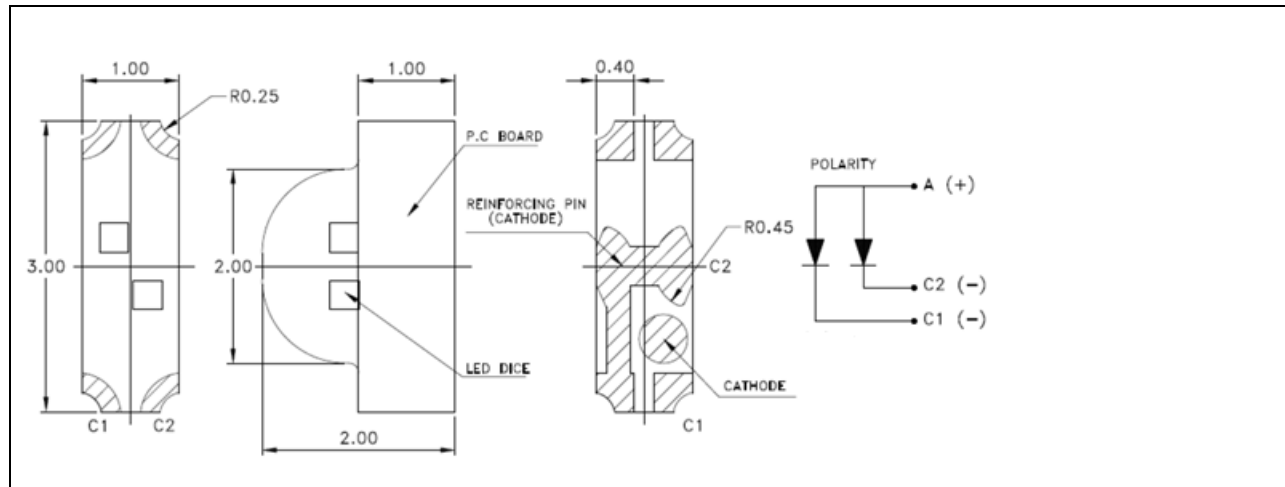
Side View SMT ChipLED

Data Sheet



Caution: This LED is class 1A ESD sensitive. Please observe appropriate precautions during handling and processing.

Package Dimensions



- All dimensions are in mm.
- Tolerance $\pm 0.1\text{mm}$ unless otherwise specified.

Device Selection Guide

Part Number	Color	Package
HSMF-C145	AlInGaP Red (C1) / InGaN Green (C2)	Water Clear

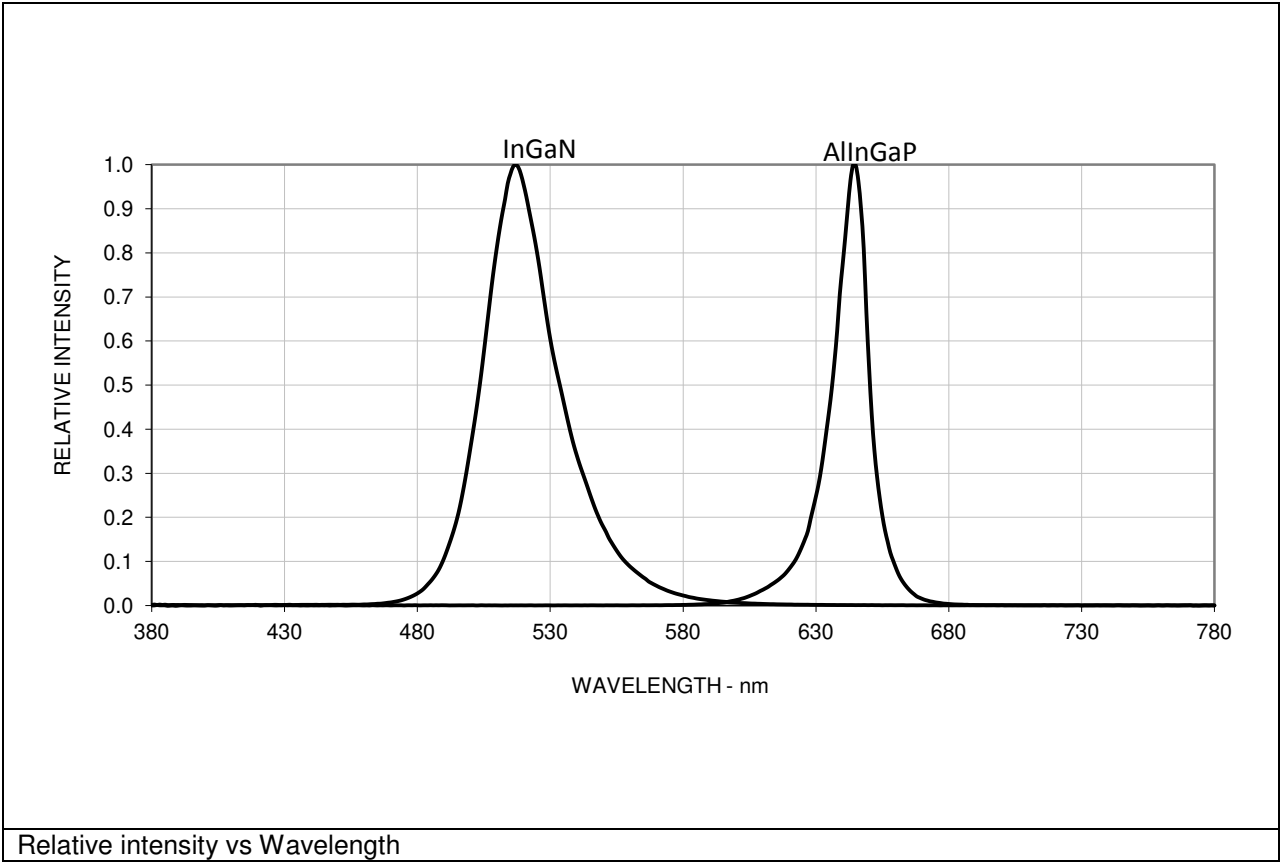
Absolute Maximum Value at $T_A = 25^\circ\text{C}$

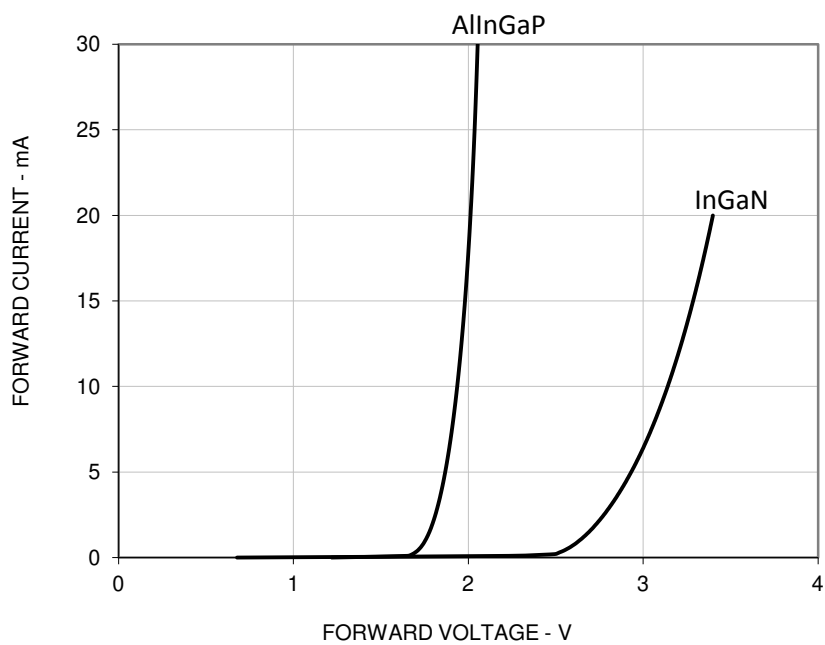
Parameter	AlInGaP	InGaN	Unit
Forward current	30	20	mA
Power dissipation	72	78	mW
Operating temperature	-30 to 85		$^\circ\text{C}$
Storage temperature	-40 to 85		$^\circ\text{C}$
Reverse voltage	Not recommended		V

Optical/Electrical Characteristics at T_A = 25°C, I_f=20mA

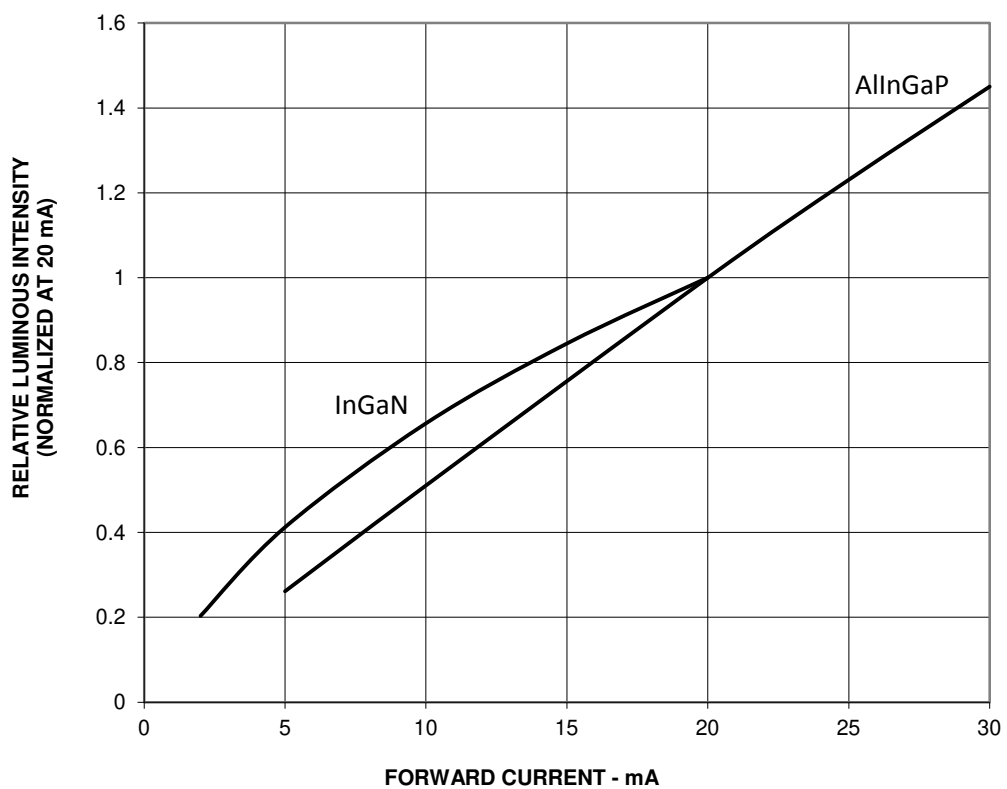
Color	Luminous intensity(mcd)		Dominant wavelength(nm)	Peak wavelength(nm)	Viewing angle(°)	Forward voltage(V)	
	Min	Typ	Typ	Typ	Typ	Min	Max
InGaN Green	45	223	523	517	120	2.9	3.9
AlInGaP Red	18	79	632	644	120	1.6	2.4

- Forward voltage tolerance is ±0.1V.

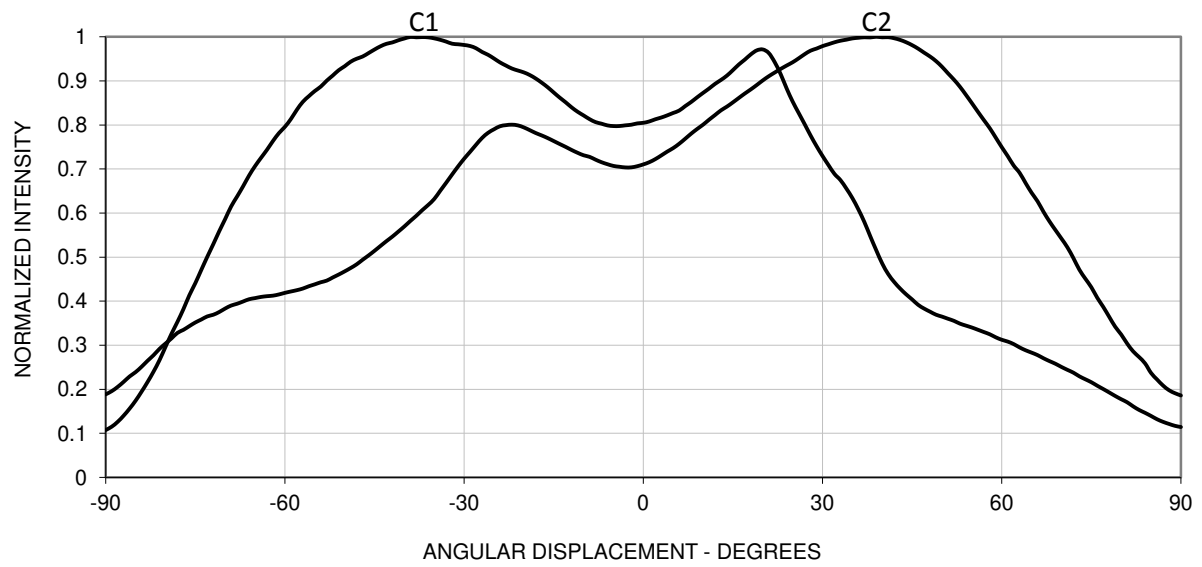




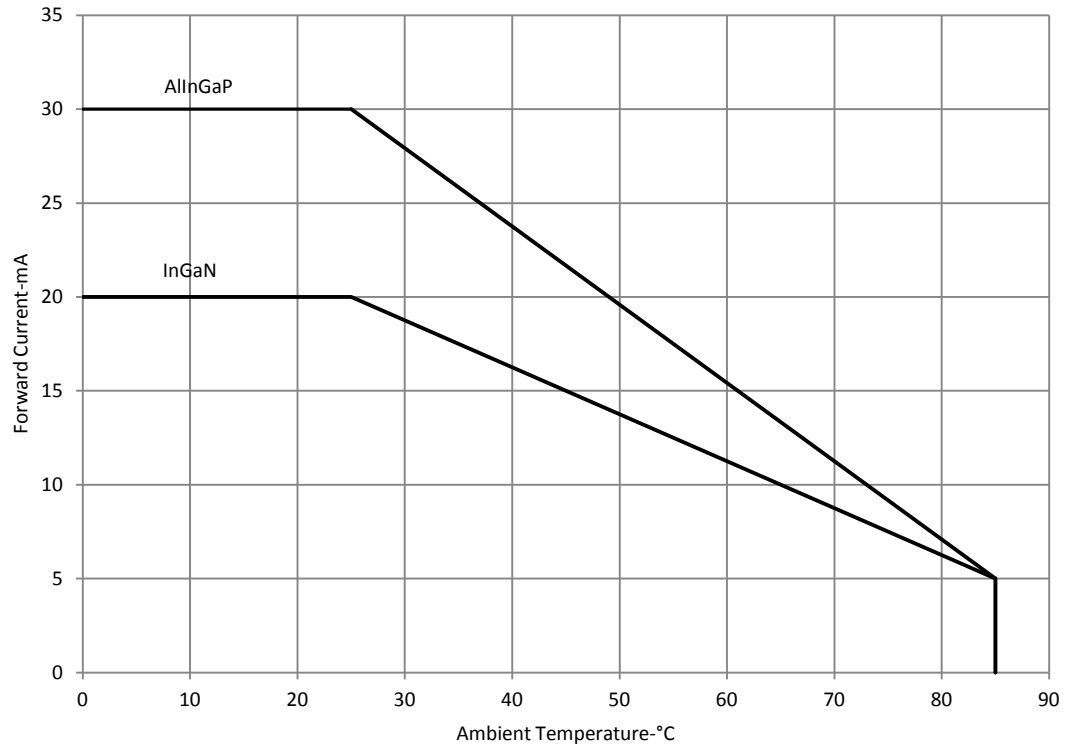
Forward current vs Forward voltage



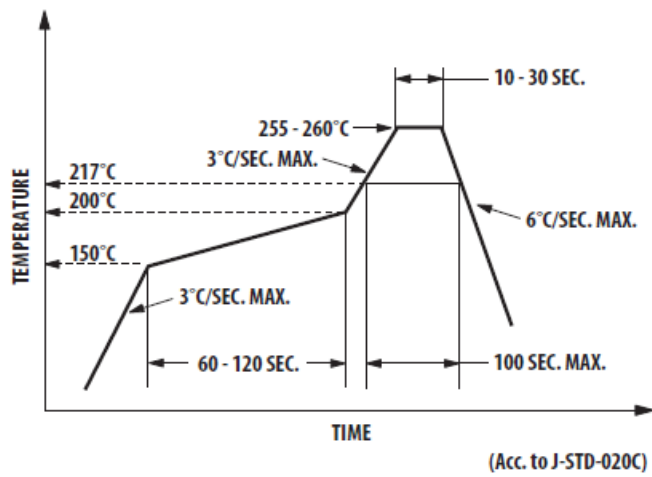
Relative intensity vs Forward current



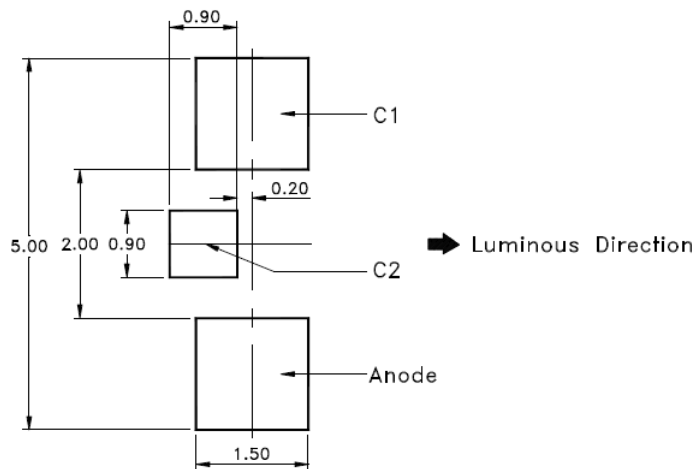
Relative intensity vs Angle



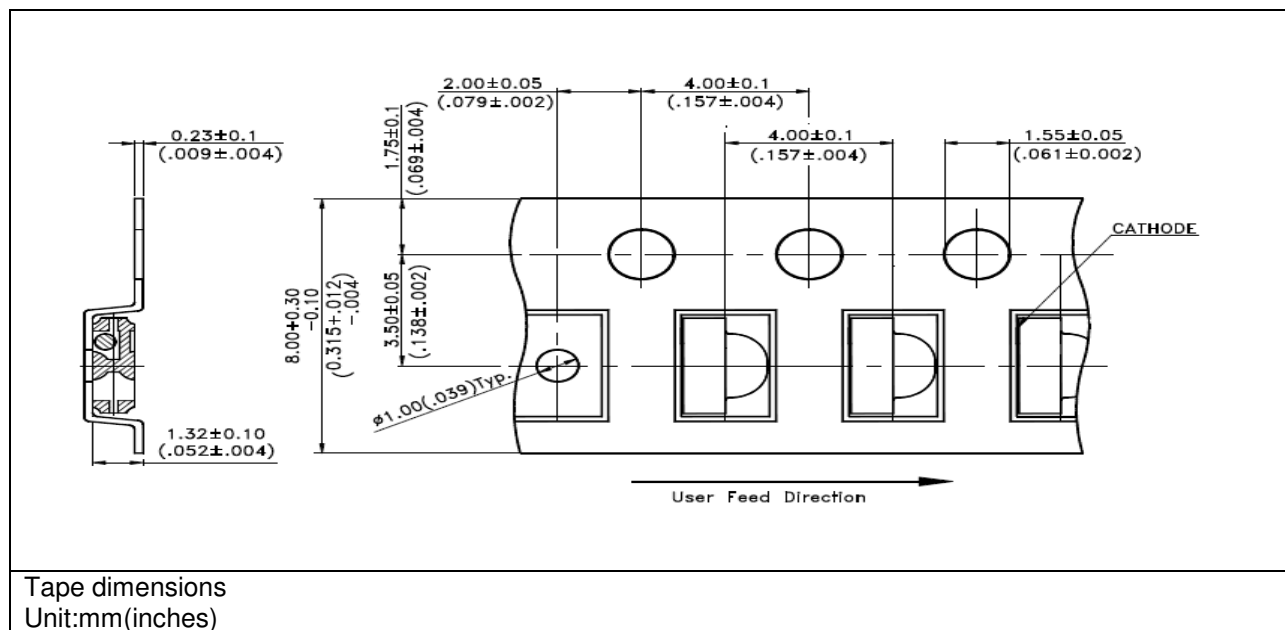
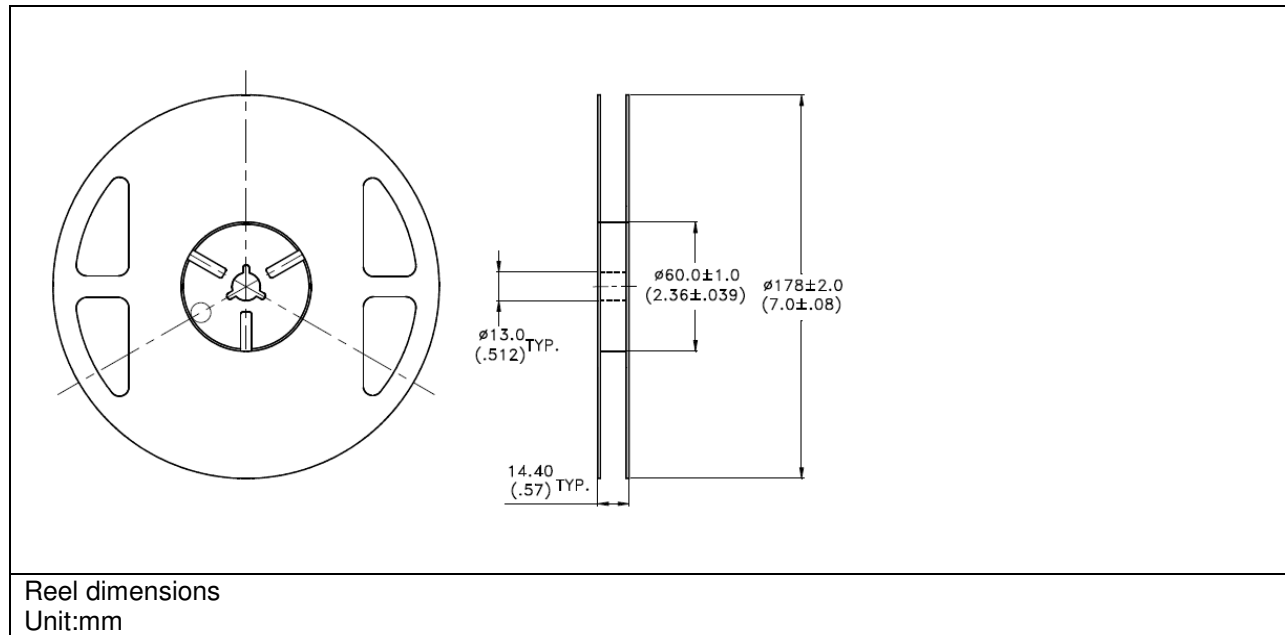
Maximum forward current vs Ambient temperature



Recommended Pb free reflow solder profile



Recommended soldering pad pattern
Unit:mm



Storage condition:

5 to 30°C at 60% RH max.

Baking is required before mounting if:

(1) Humidity indicator card is >10% when read at 23 \pm 5°C.

(2) Device expose to factory conditions <30°C/60%RH more than 672 hours.

Baking recommended condition: 60 \pm 5°C for 20 hours.

Luminous Intensity Bin

Bin	Min (mcd)	Max (mcd)
M	18.0	28.5
N	28.5	45.0
P	45.0	71.5
Q	71.5	112.5
R	112.5	180.0

Tolerance for each bin limit is $\pm 15\%$

InGaN Green Color Bin

Bin	Min (nm)	Max (nm)
A	515.0	520.0
B	520.0	525.0
C	525.0	530.0
D	530.0	535.0

Tolerance for each bin limit is $\pm 0.5\text{nm}$

AlInGaP Red Color Bin

Bin	Min (nm)	Max (nm)
-	620	635

Tolerance for each bin limit is $\pm 1\text{nm}$

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