

# HSMF-C145

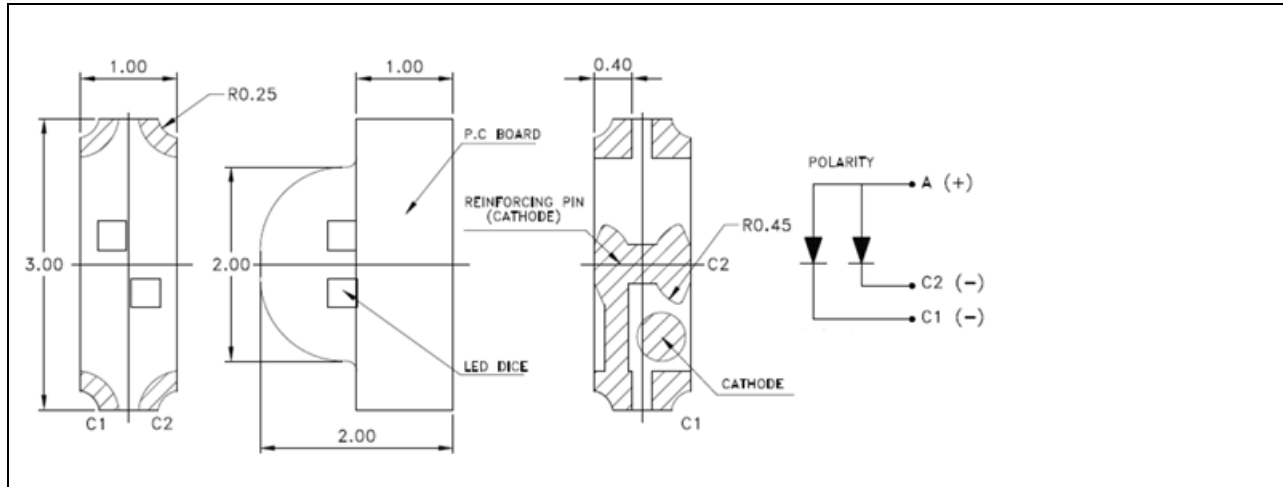
## Side View SMT ChipLED

### 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  $\pm 0.1$ mm unless otherwise specified.

#### Device Selection Guide

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

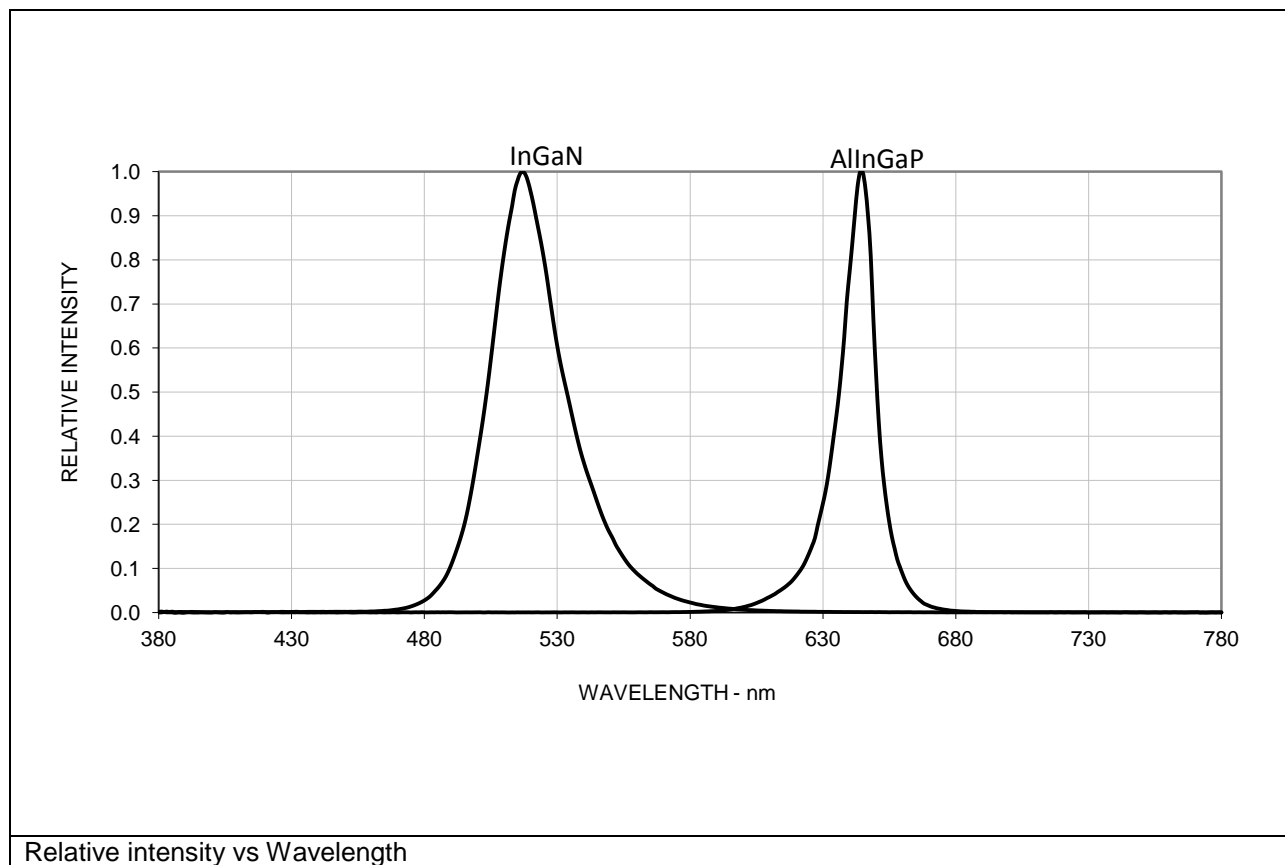
#### Absolute Maximum Value at $T_A = 25^\circ\text{C}$

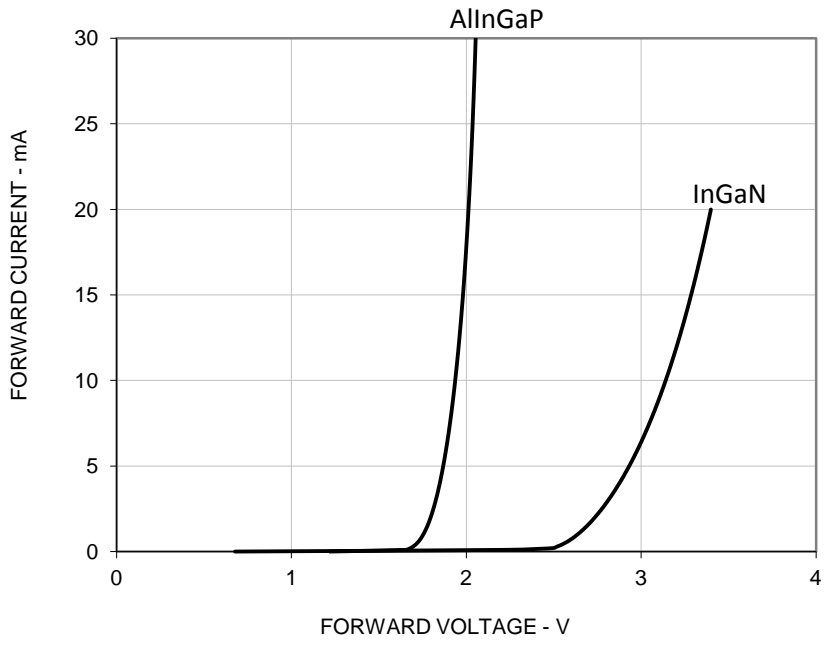
Parameter	AlInGaP	InGaN	Unit
Forward current	30	20	mA
Power dissipation	72	78	mW
Operating temperature	-30 to 85		$^\circ\text{C}$
Storage temperature	-40 to 85		$^\circ\text{C}$
Reverse voltage	Not recommended		V

Optical/Electrical Characteristics at  $T_A = 25^\circ\text{C}$ ,  $I_f = 20\text{mA}$

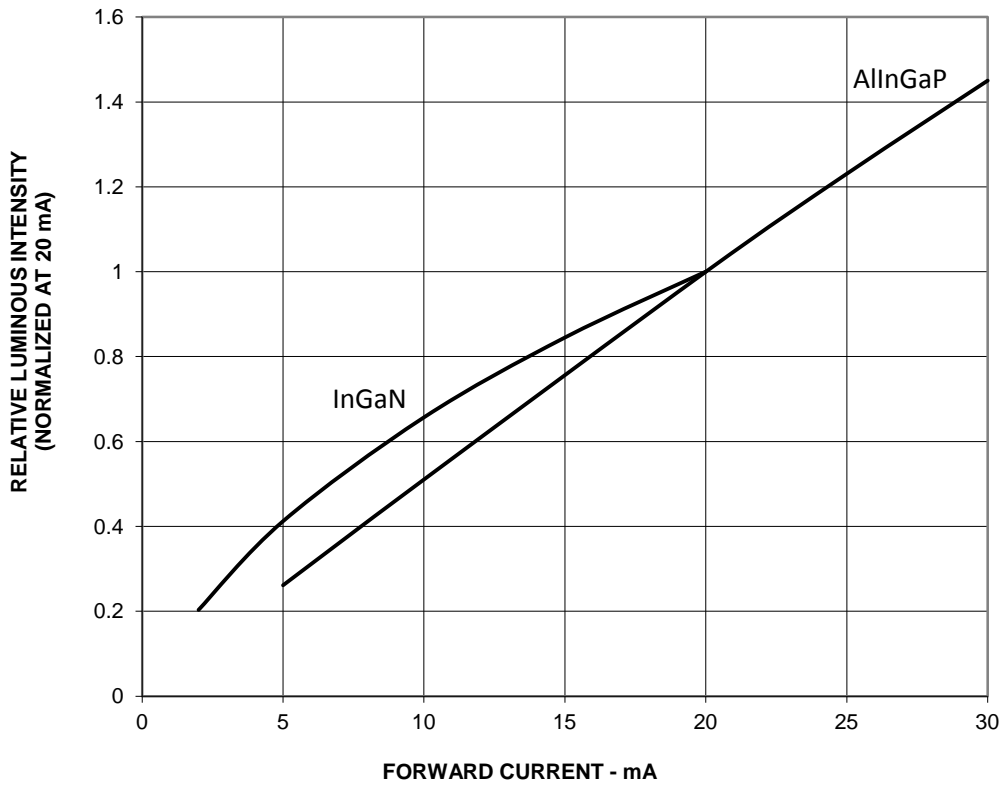
Color	Luminous intensity(mcd)		Dominant wavelength(nm)	Peak wavelength(nm)	Viewing angle(°)	Forward voltage(V)	
	Min	Typ	Typ	Typ	Typ	Min	Max
InGaN Green	45	223	523	517	120	2.9	3.9
AlInGaP Red	18	79	632	644	120	1.6	2.4

- Forward voltage tolerance is  $\pm 0.1\text{V}$ .

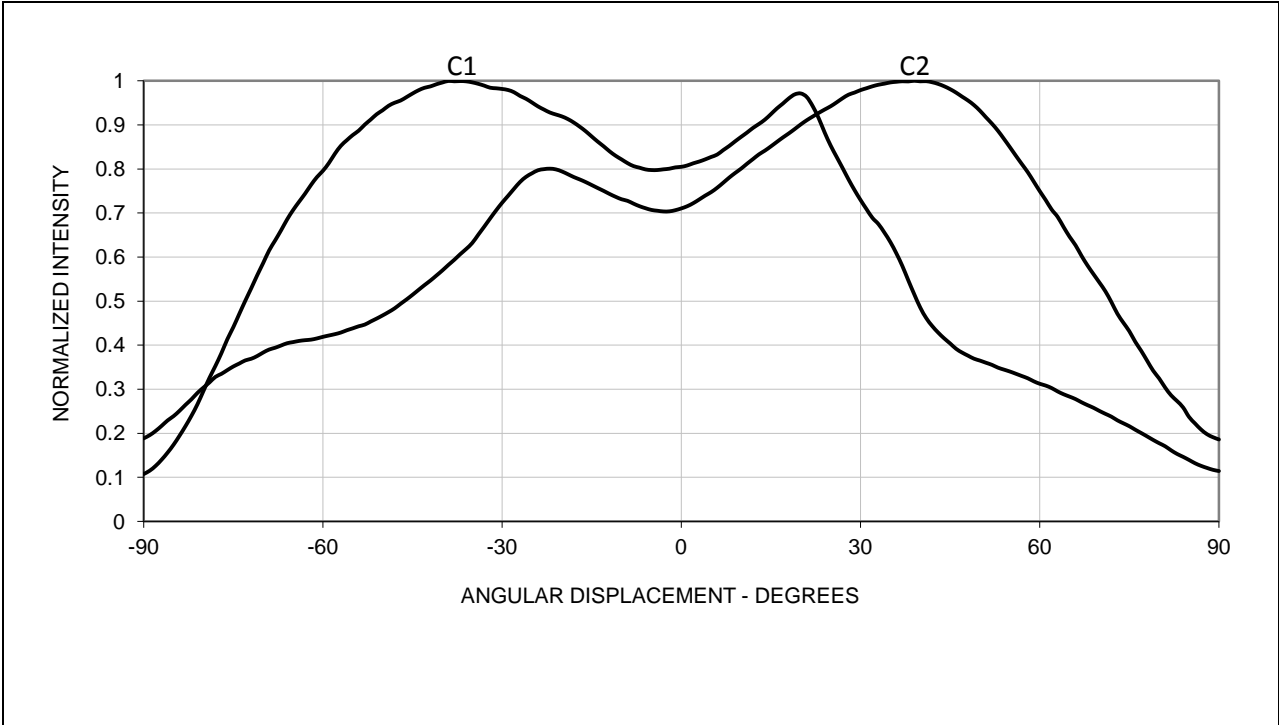




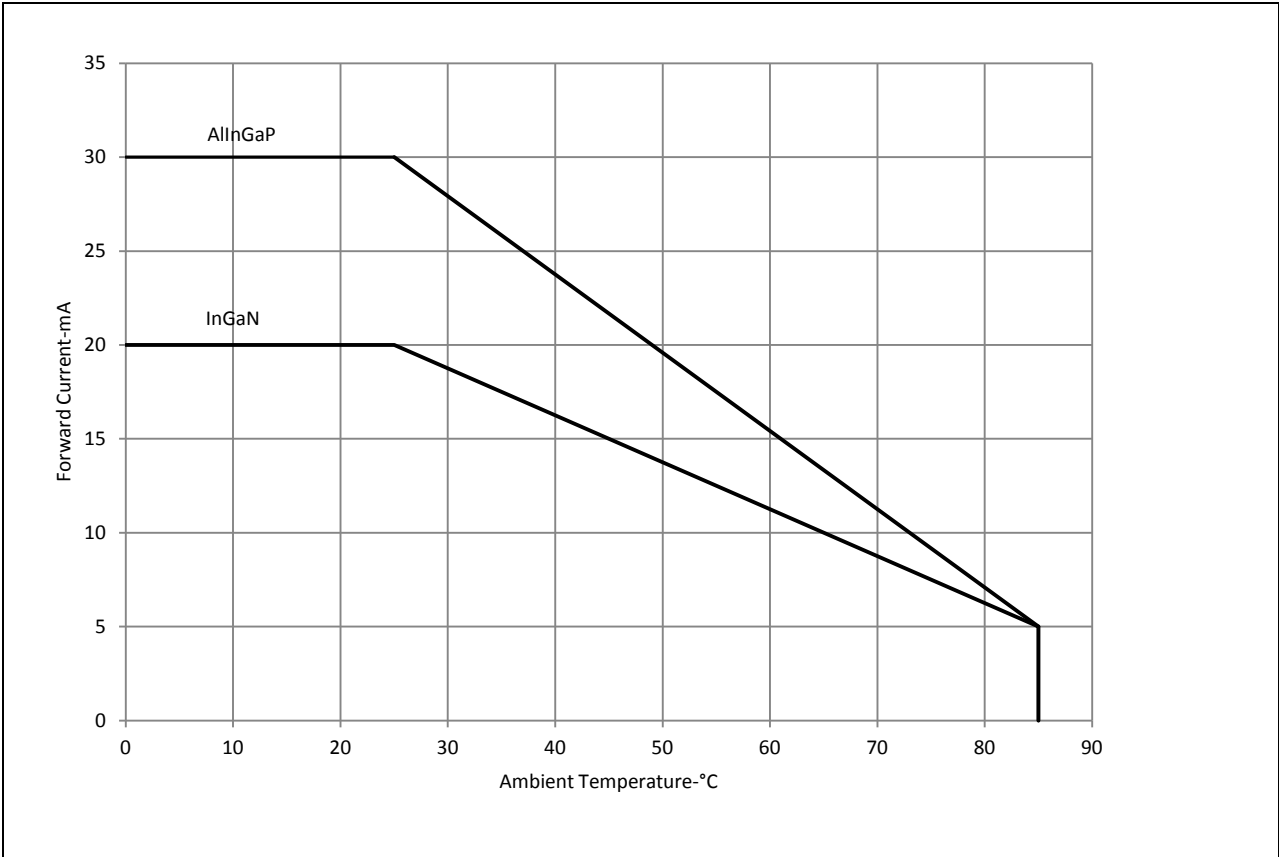
Forward current vs Forward voltage



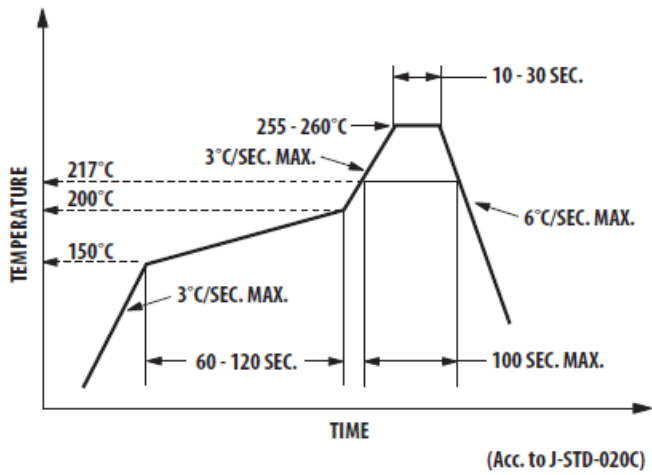
Relative intensity vs Forward current



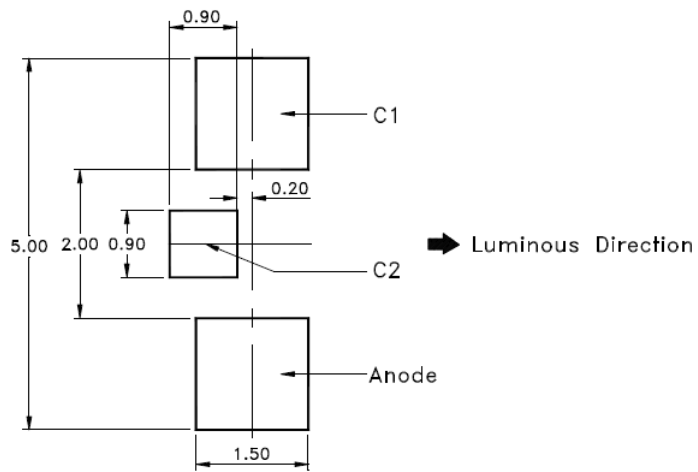
Relative intensity vs Angle



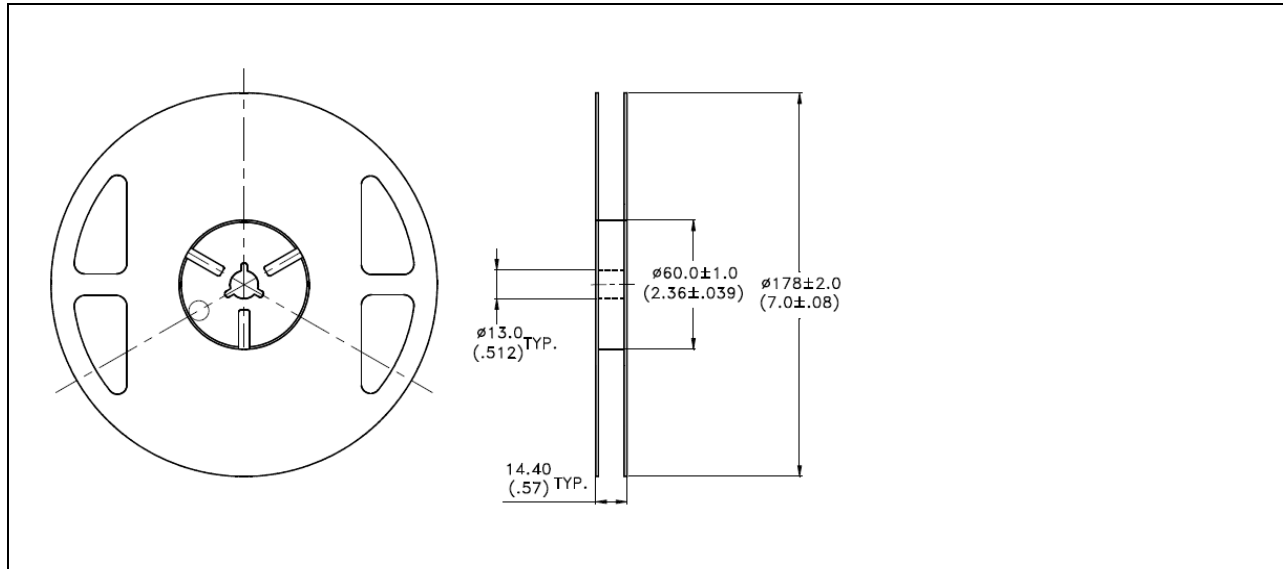
Maximum forward current vs Ambient temperature



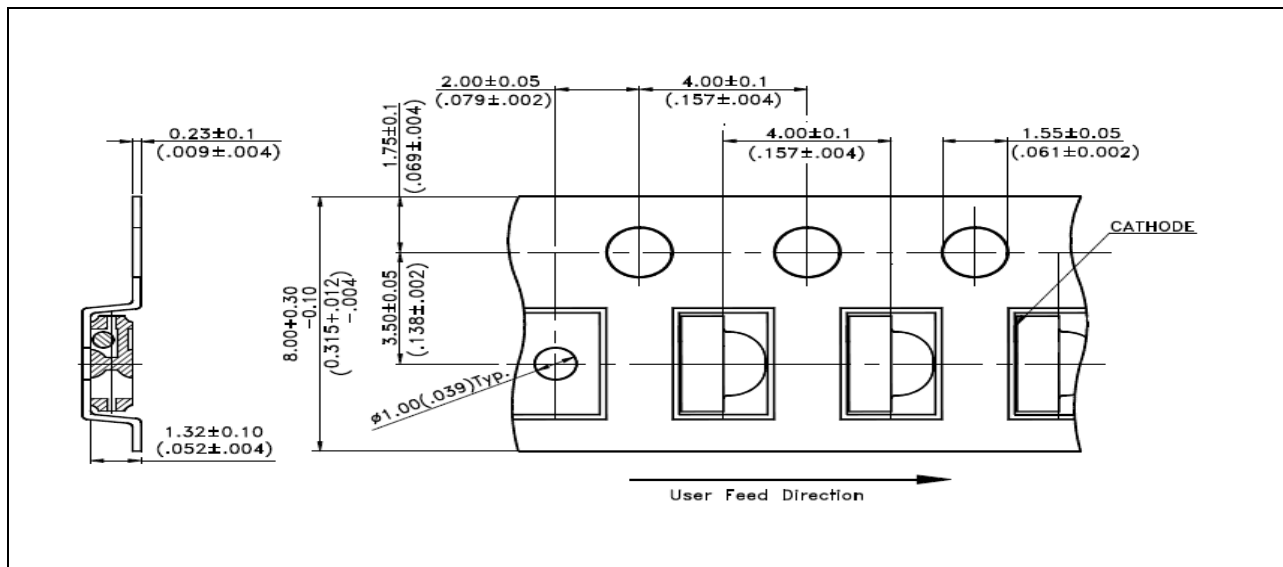
Recommended Pb free reflow solder profile



Recommended soldering pad pattern  
Unit:mm



Reel dimensions  
Unit:mm



Tape dimensions  
Unit:mm(inches)

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±5°C.
- (2) Device expose to factory conditions <30°C/60%RH more than 672 hours.

Baking recommended condition: 60±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  $\pm 0.5\text{nm}$

**AllnGaP Red Color Bin**

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

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

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