



American Opto Plus LED Corp.

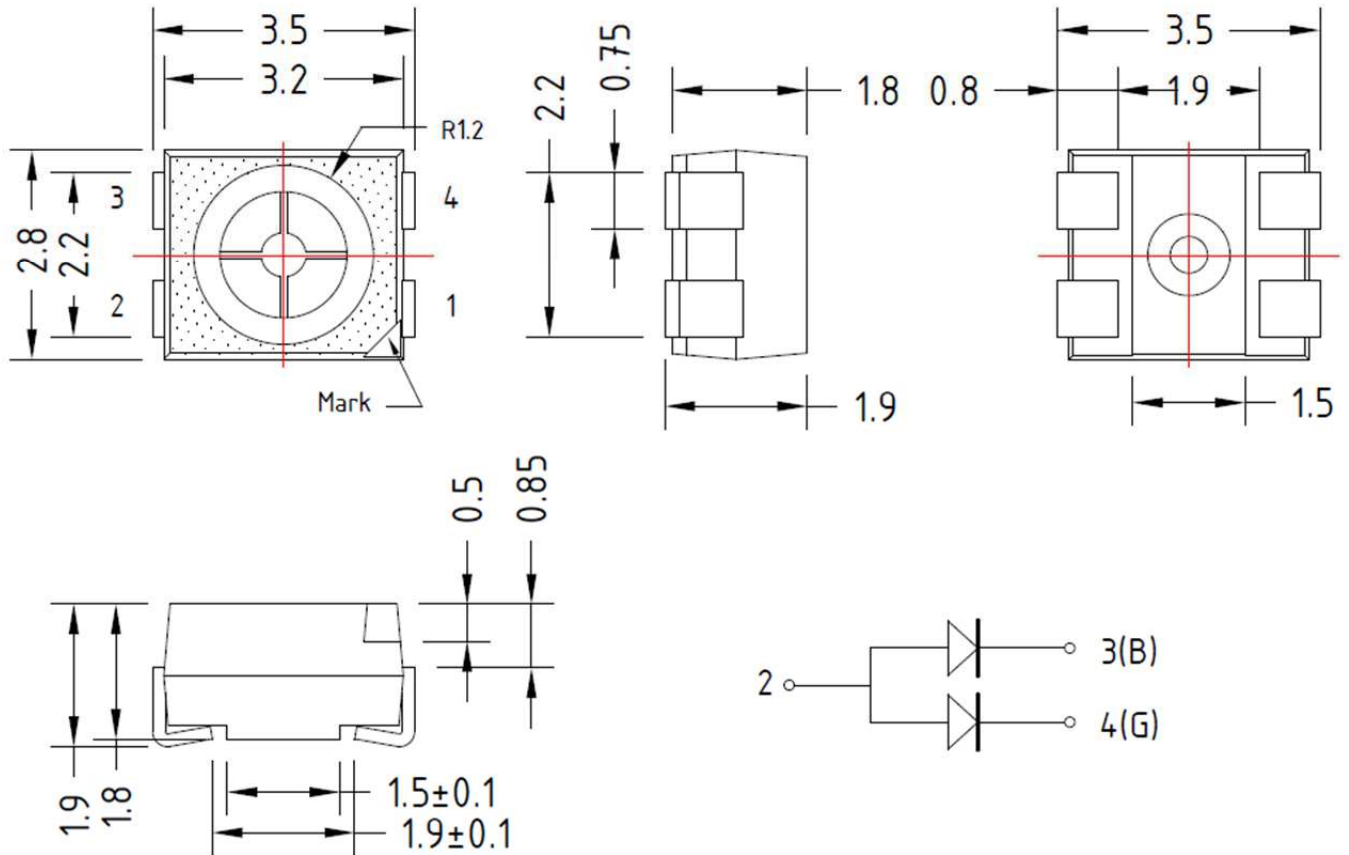
L955QBTGC-2

3.5 X 2.8 X 1.9mm PLCC-4

MAIN FEATURES:

- Dual Color Blue(InGaN) & Pure Green(InGaN) LED
- Wide viewing angle 120°
- PLCC-4 3.5x2.8 standard package
- High reliability package

PACKAGE OUTLINES:



Item	Materials
Package	Heat-Resistant Polymer
Encapsulating Resin	Silicone
Electrodes	Ag Plating Copper Alloy

NOTES:

1. All dimensions are in millimeters (inches);
2. Electrical Connection between all Cathodes is Recommended



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Max Rating		Unit
		Blue	Green	
Power Dissipation Single Color	P _D	150	150	mW
Peak Pulse Forward Current	I _{PF}	100	100	mA
DC Forward Current	I _F	30	30	mA
Reverse Voltage	V _R	5	5	V
Operating Temperature	T _{OPR}	-30~+100		°C
Storage Temperature	T _{STG}	-40~+100		°C
Solder Temperature	T _{SOL}	265°C for 10 sec Hand soldering: 350°C for 3sec		

*IFP Conditions: Pulse Width ≤ 10msec and Duty ≤ 1/10

*Value for total power dissipation when two or more device are lit simultaneously

OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Blue			Green			Unit
			Min	Typ	Max	Min	Typ	Max	
Luminous Intensity	I _v	I _F = 20mA	240	300	400	880	1000	1500	mcd
Reverse Current	I _r	I _F =20mA	--	--	50	--	--	50	μA
Dominant Wavelength	λ _d	I _F = 20mA	465	470	475	520	525	530	nm
Peak Wavelength	λ _p	I _F = 25mA	--	465	--	--	515	--	nm
Spectral Half Width	Δλ _{1/2}	I _F = 25mA	--	20	--	--	28	--	nm
Forward Voltage	V _F	I _F =20mA	2.9	3.1	3.6	2.9	3.1	3.6	V

Notes: Luminous intensity tolerance is ±10%



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Luminous Intensity Bin Table

I_F=20mA

Rank name	Blue (mcd)		Green (mcd)	
	Min	Max	Min	Max
JQ	240	310	1150	1500
JR	310	400	1150	1500
KQ	240	310	1500	1900
KR	310	400	1500	1900

* Tolerance for each bin limit is ±15%

Color Bin Table

I_F=20mA

Rank name	Blue (nm)		Green (nm)	
	Min	Max	Min	Max
1	465	470	520	525
2	465	470	525	530
3	465	470	520	525
4	465	470	525	530

* Tolerance for each bin limit is ±15%



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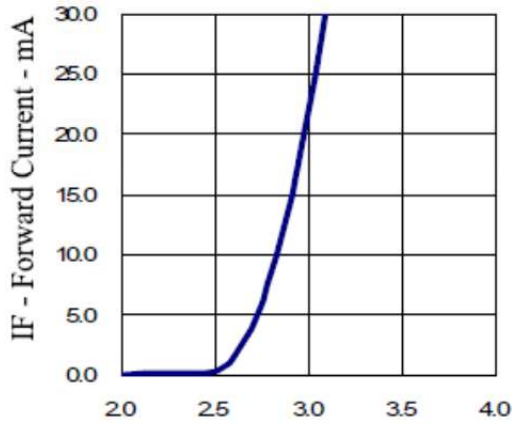
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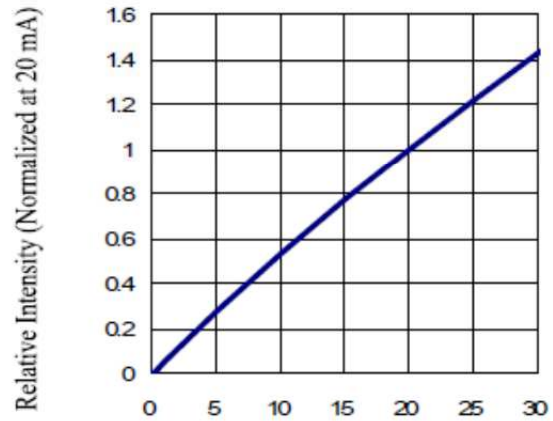
OPTICAL CHARACTERISTIC CURVES:

Forward Current vs. Forward Voltage



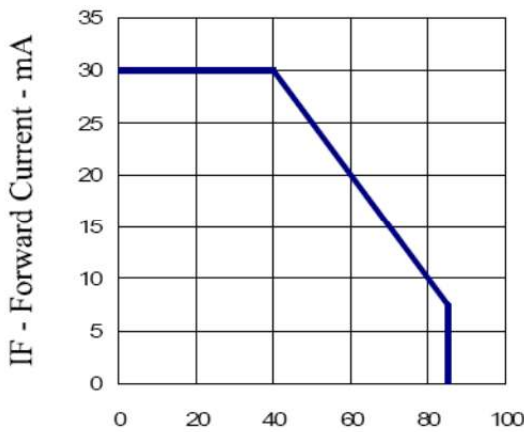
VF - Forward Voltage - V

Relative Intensity vs. Forward Current



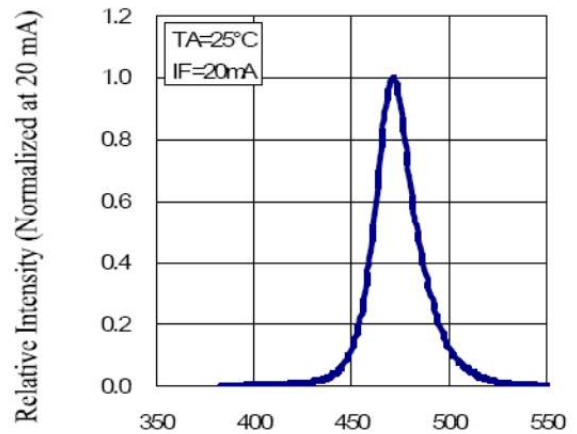
DC Forward Current - mA

Forward Current vs. Ambient Temperature



TA - Ambient Temperature - °C

Relative Intensity vs. Wavelength



Wavelength - nm



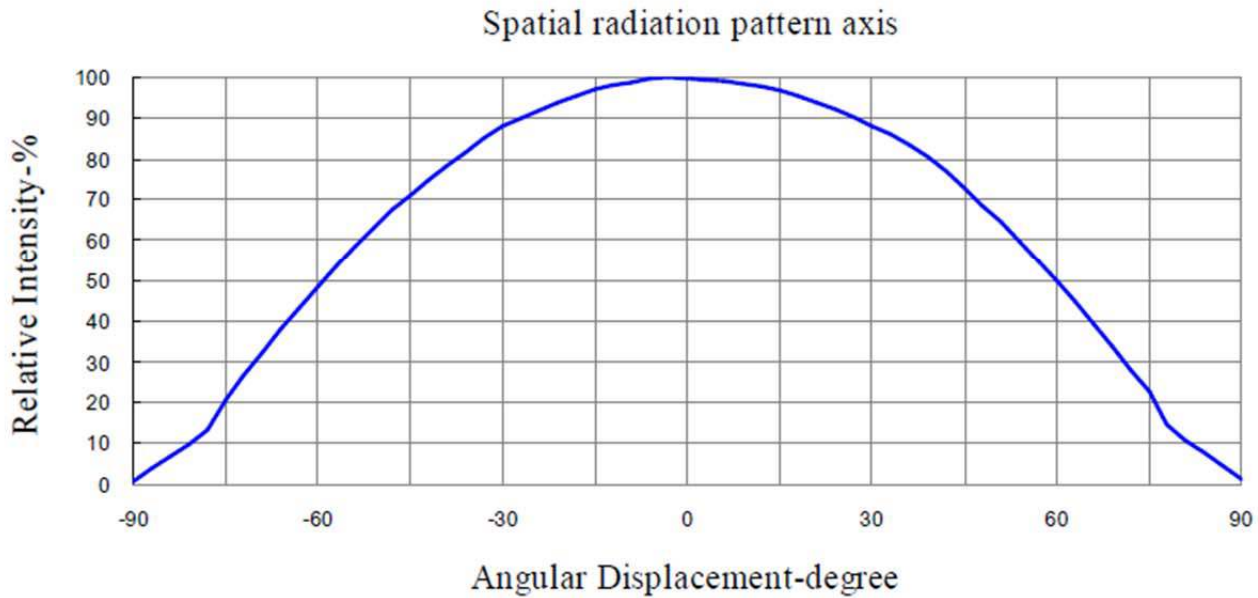
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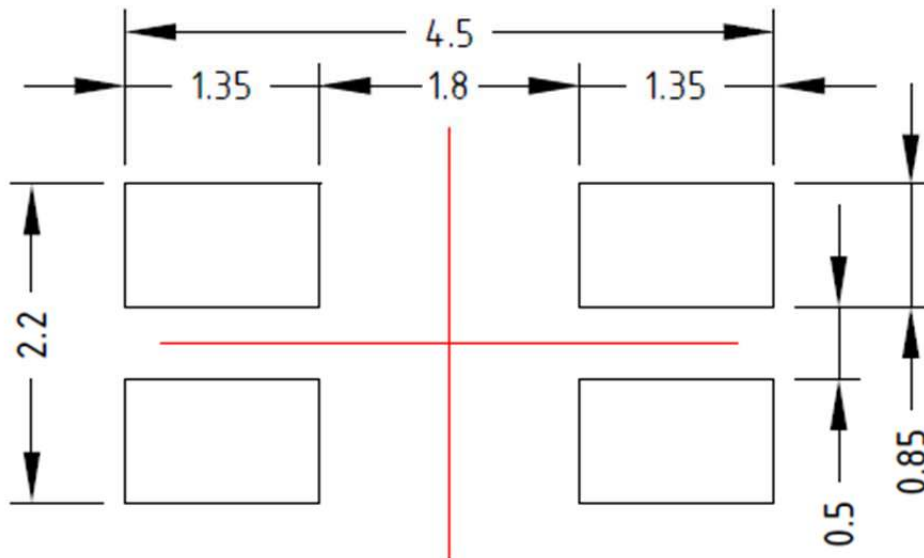
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Radiation Pattern



Recommended Soldering Pad Pattern





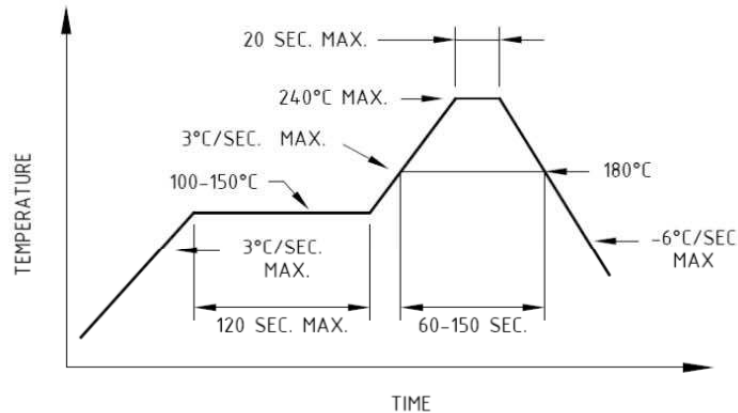
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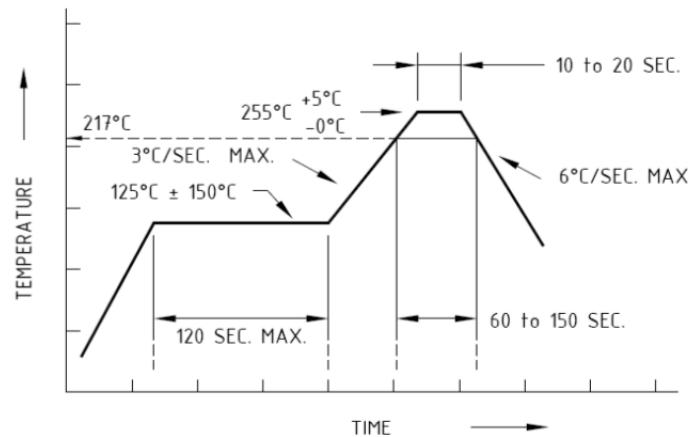
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Soldering Conditions



Recommended reflow soldering profile



Recommended Pb-free reflow soldering profile

- Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.
- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.



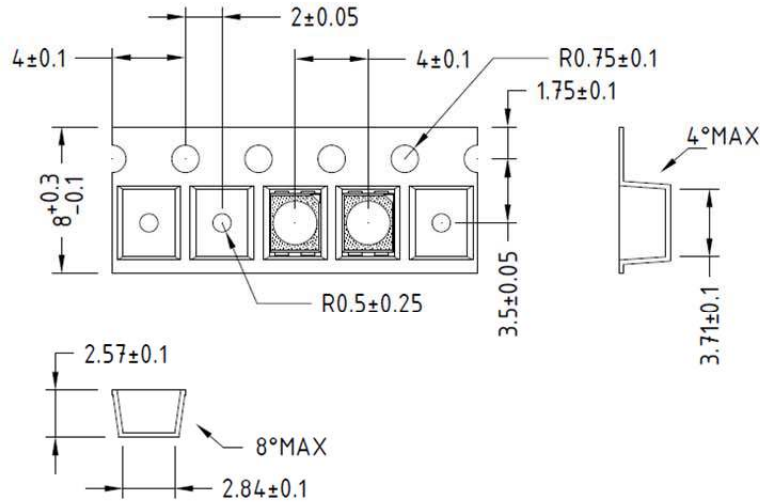
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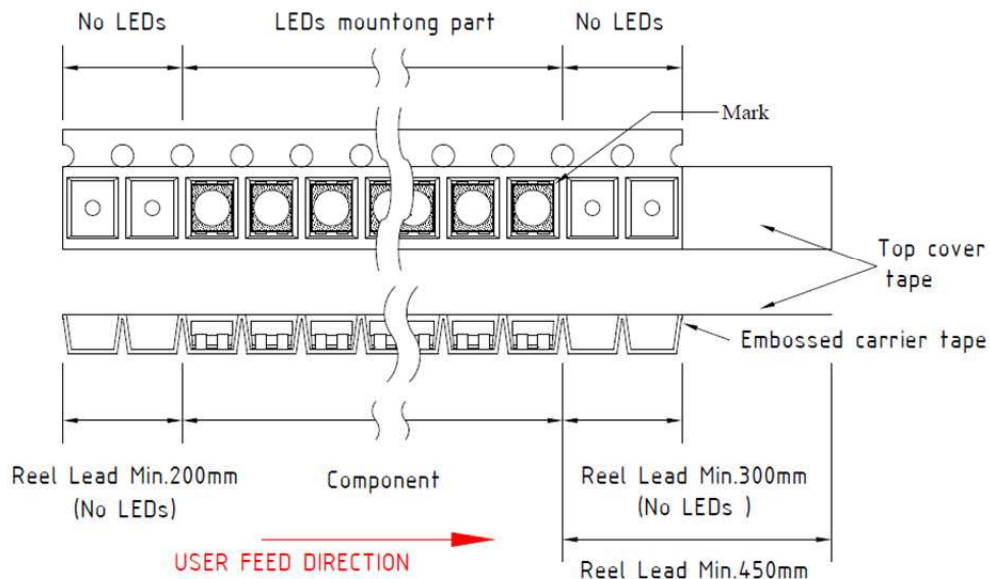
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Tape Dimension



Tape Leader and Trailer Dimension





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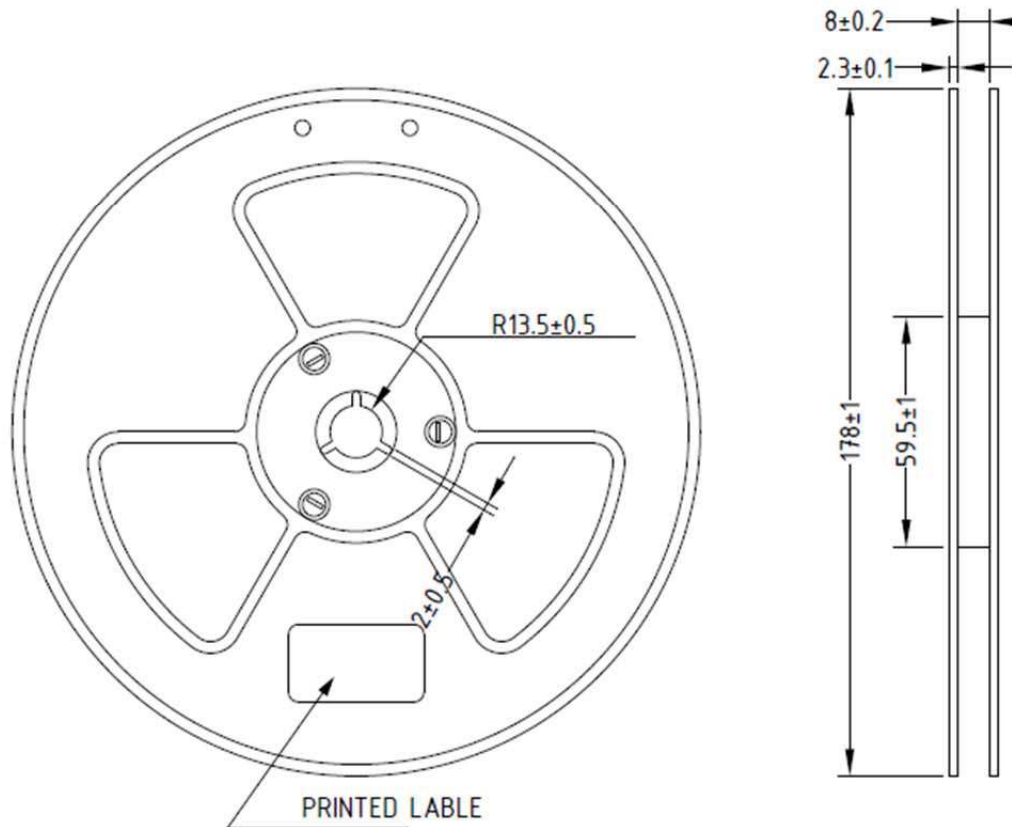
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Reel dimension



Note: Baking is required under the following conditions:

The pack has been opened for more than four weeks.

Baking recommended conditions:

60 ± 5 °C for 20 hours.