

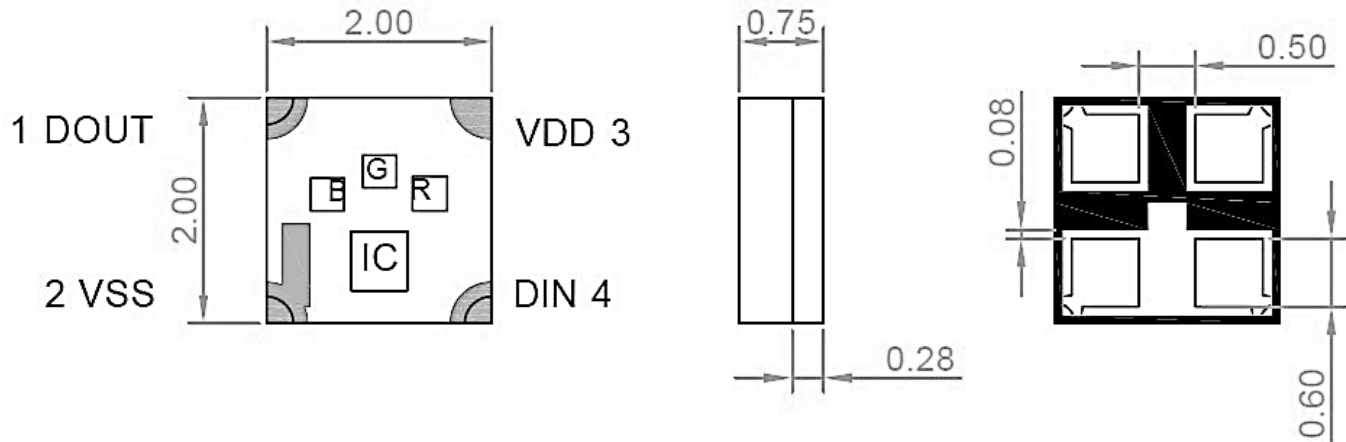


American Opto Plus LED Corp.

L202L-LEPGBW3DI

2.0 x 2.0 x 0.75mm RGB Chip SMD LED with Built in IC

PACKAGE DIMENSION



NO.	Symbol	Function description
1	DOUT	Control date signal output
2	VSS	Ground
3	VDD	DC power input
4	DIN	Control date signal input

Material	Color	
	Emitted	Lens
AlGaInP	Red	White Diffused
InGaN	Blue	
InGaN	Green	

NOTES:

1. All dimension are in millimeter tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.
2. Specifications are subject to change without notice.

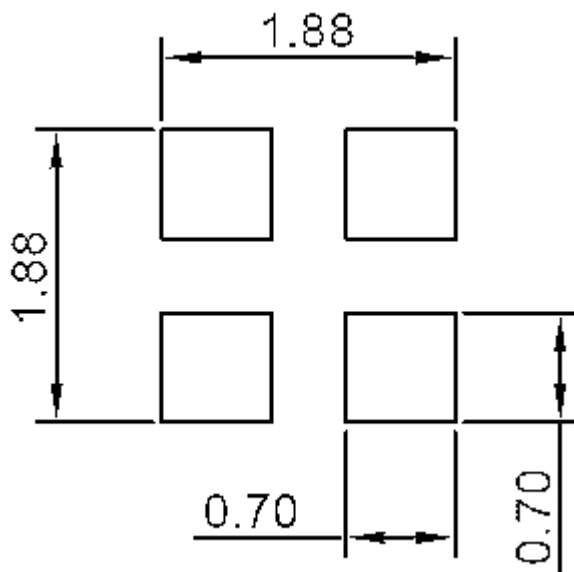


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RECOMMENDED SOLDERING PAD DIMENSIONS



NOTES:

1. The tolerances unless mentioned is $\pm 0.1\text{mm}$, angle $\pm 0.5^\circ$.
2. Unit = mm



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ABSOLUTE MAXIMUM RATINGS

(TA=25°C, VDD=5V, VSS=0)

Parameter	Symbol	Ratings	Unit
Supply voltage	VDD	3.5~5.5	V
LED output current	I _{OUT}	6	mA
Operating temperature	T _{opr}	-40~+85	°C
Storage temperature	T _{stg}	-40~+100	°C

TYPICAL ELECTRICAL & OPTICAL CHARACTERISTICS

(TA=25°C)

Items	Symbol	Min	Typ	Max	Unit	Condition
Supply voltage	VDD	3.5	5	5.5	V	
Each R/G/B current	IOL		5		mA	VDD=5V
Input high voltage	VIH	0.7XVDD			V	DI
Input low voltage	VIL			0.3XVDD	V	DI
Operation current	IDD		0.3		mA	B.G.R No load

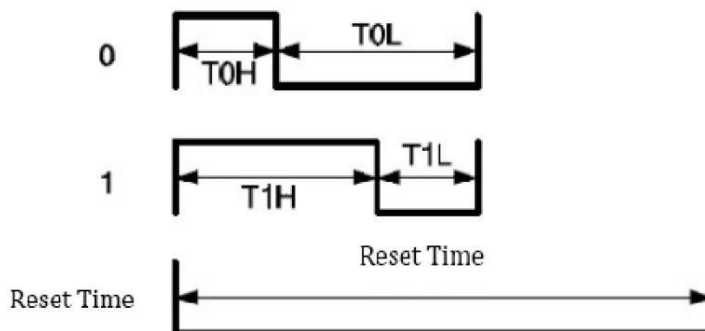


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TIMING WAVE FORM



HIGH SPEED MODE

Item	Description	Min.	Typical	Max	Unit
T0H	0 code, High- level time	200	300	400	ns
T0L	0 code, Low- level time	800	900	--	ns
T1H	1 code, High- level time	800	900	1000	ns
T1L	1 code, Low- level time	200	300	--	ns
Trst	Rest code, Low- level time	200	--	--	us

NOTE: TH+TL>1.2us

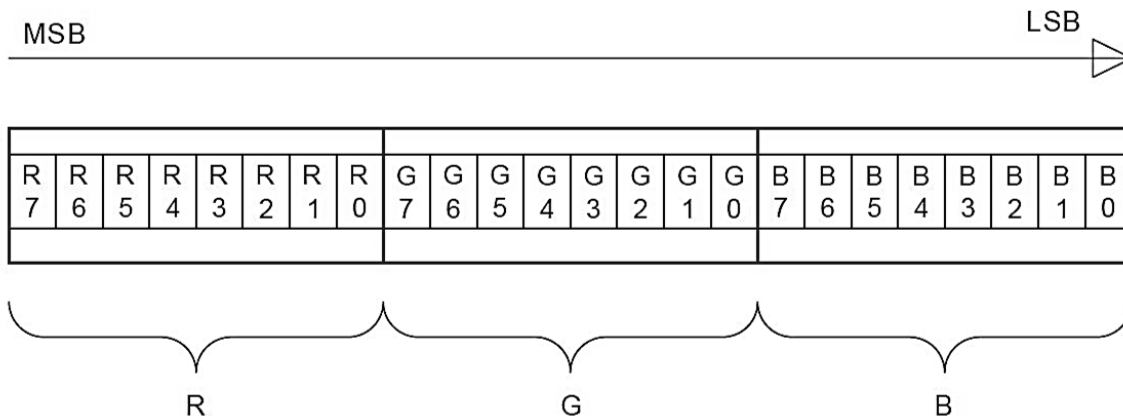


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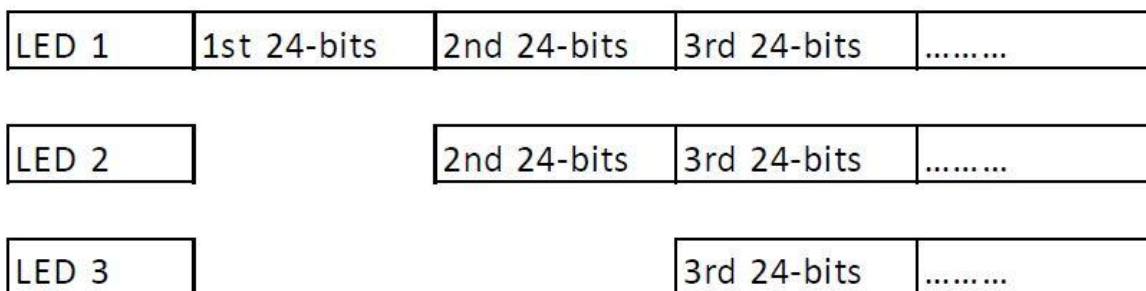
L202L-LEPGBW3DI

2.0 x 2.0 x 0.75mm RGB Chip SMD LED with Built in IC

SINGLE DATA IN 24BIT FOR RGB



DATA COMMUNICATION





American Opto Plus LED Corp.

L202L-LEPGBW3DI

2.0 x 2.0 x 0.75mm RGB Chip SMD LED with Built in IC

ELECTRICAL/OPTICAL CHARACTERISTICS

(TA=25°C)

Item	Symbol		Condition	Min	Typ	Max	Unit
Luminous intensity	Iv		VDD=5V	320		770	mcd
Dominant wavelength	λ_D	R			622		nm
		G			530		
		B			468		
Viewing angle	2 θ 1/2				120		deg

NOTES:

1. The luminous intensity data did not including $\pm 15\%$ testing tolerance.
2. The dominant wavelength data did not including $\pm 1\text{nm}$ testing tolerance.

LUMINOUS INTENSITY CLASSIFICATION

Bin code	Iv(mcd)	
	Min.	Max.
3	320	400
4	400	500
5	500	620
6	620	770

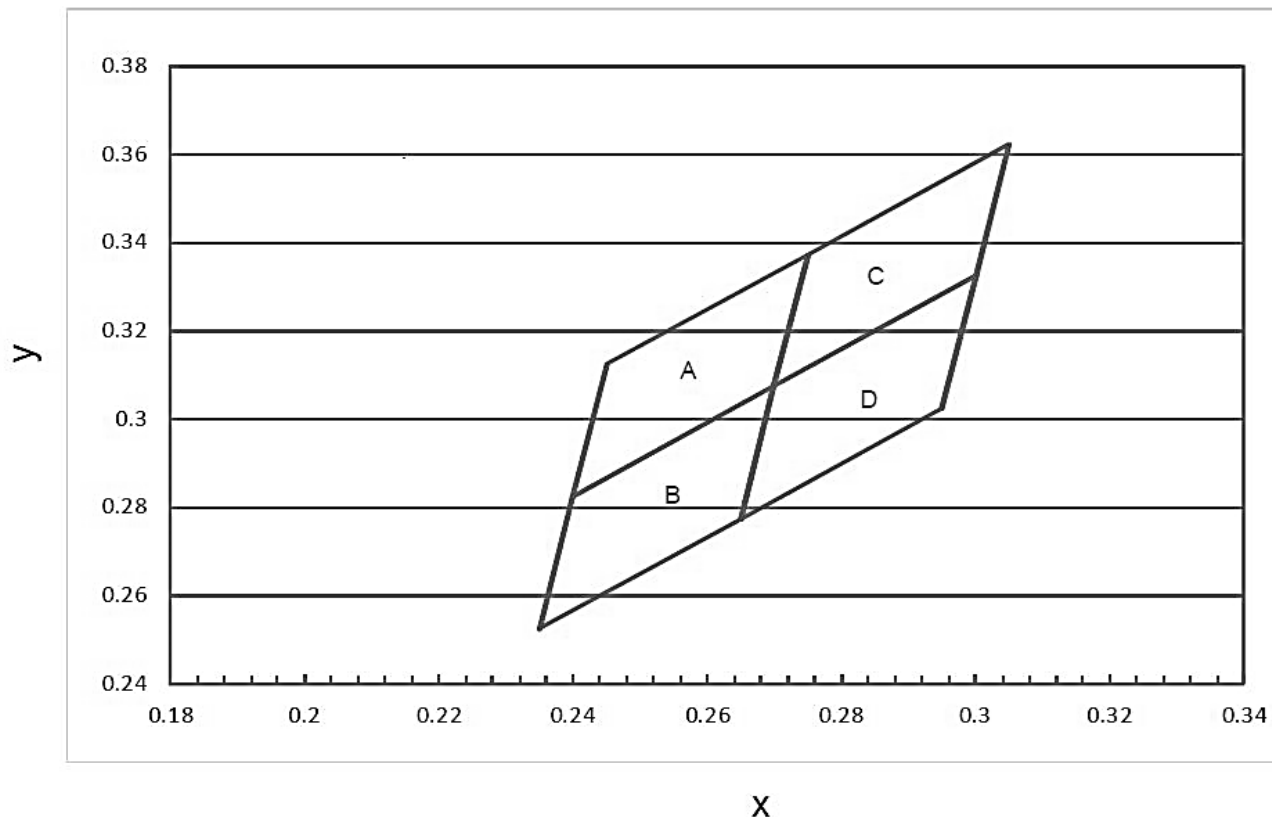


American Opto Plus LED Corp.

L202L-LEPGBW3DI

2.0 x 2.0 x 0.75mm RGB Chip SMD LED with Built in IC

CHROMATICITY COORDINATES SPECIFICATIONS FOR FIN GRADING



Color Coordinantes								
BIN CODE	1		2		3		4	
	X	Y	X	Y	X	Y	X	Y
A	0.240	0.282	0.245	0.312	0.275	0.337	0.270	0.307
B	0.235	0.252	0.240	0.282	0.270	0.307	0.265	0.277
C	0.270	0.307	0.275	0.337	0.305	0.362	0.300	0.332
D	0.265	0.277	0.270	0.307	0.300	0.332	0.295	0.302

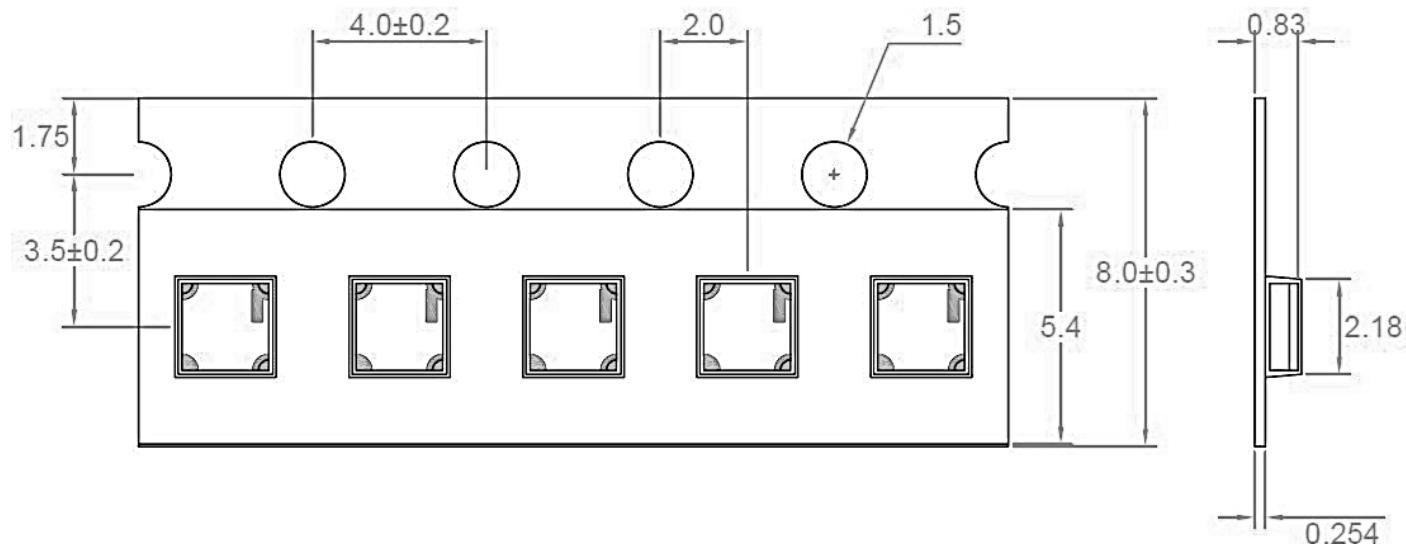


American Opto Plus LED Corp.

L202L-LEPGBW3DI

2.0 x 2.0 x 0.75mm RGB Chip SMD LED with Built in IC

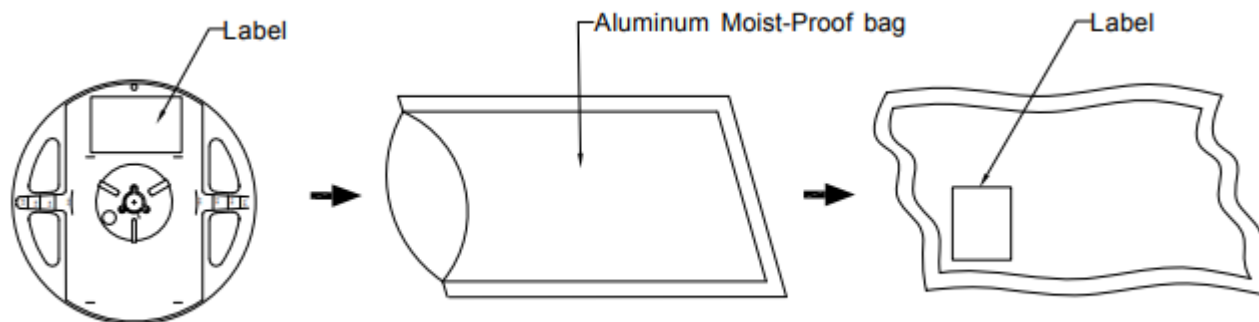
CARRIER TYPE DIMENSIONS



NOTE:

1. The tolerances unless mentioned is ± 0.1 mm, angle ± 0.5 .
2. Unit=mm

PACKING SPECIFICATIONS



NOTES:

1. 8.0 mm tape, 7" reel
2. 3000 PCS

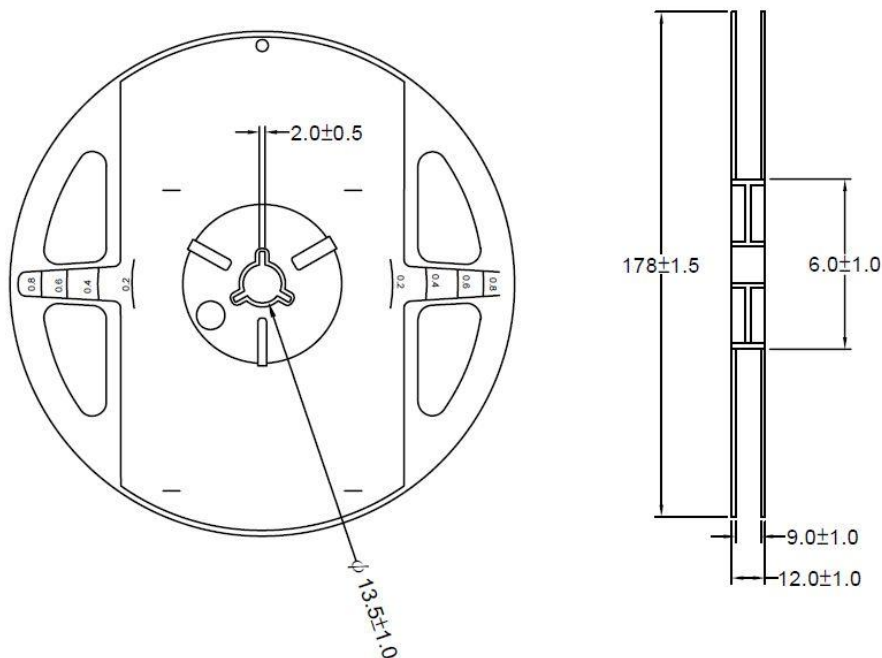


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L202L-LEPGBW3DI

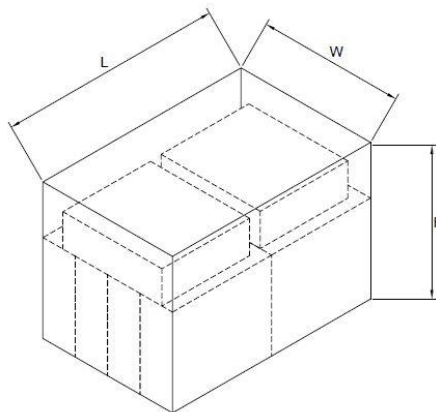
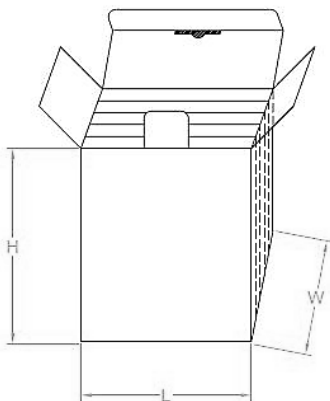
2.0 x 2.0 x 0.75mm RGB Chip SMD LED with Built in IC

REEL DIMENSIONS



BOX EXPLANATION

1. 5 bag / inner box
2. Inner box size: L x W x H
23cm x 8.5cm x 26cm
3. 10 Inner box / carton
4. Carton size: L x W x H
58cm x 34cm x 35cm





American Opto Plus LED Corp.

L381L-LEPGB3DI6

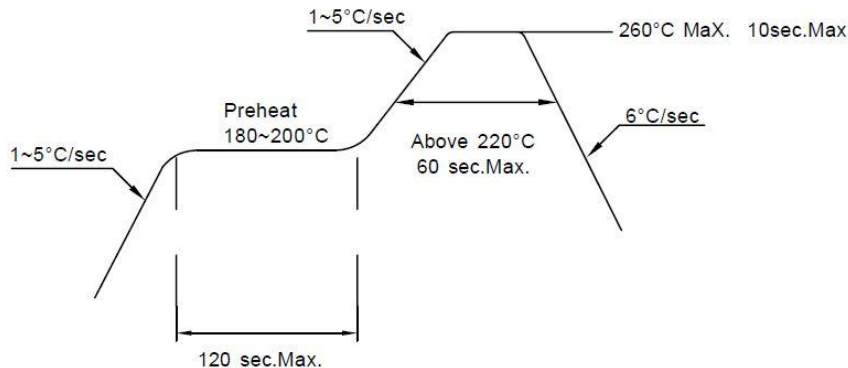
5.4 x 5.0 x 1.6mm RGB SMD LED with IC (5050 Package)

RECOMMENDED SOLDERING CONDITIONS

1. Hand solder

Basic spec is $\leq 280^{\circ}\text{C}$ 3sec one time only

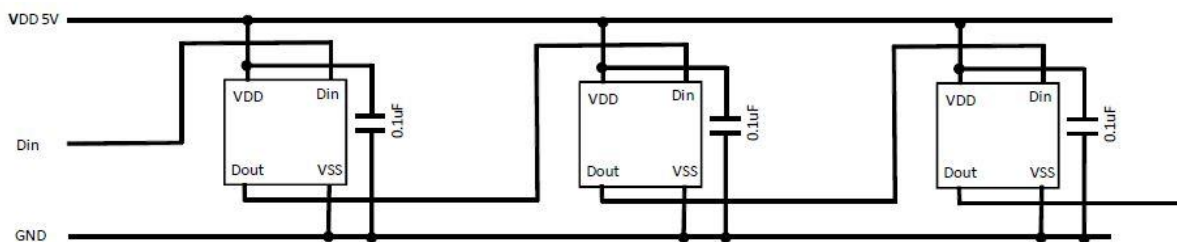
2. PB-Free reflow solder



NOTES:

1. Reflow soldering should not be done more than two times.
2. When soldering, do not put stress on the LEDs during heating.
3. After soldering, do not warp the circuit board.

Recommended route



Cleaning

Use alcohol based cleaning solvents such as isopropyl alcohol to clean the LED.

ESD (Electrostatic Discharge)

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or Anti-electrostatic glove is recommended when handling these LED. All devices, equipment and machinery must be properly grounded.