



American Opto Plus LED Corp.

L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

DATA SHEET RECORD HISTORY:

Version 1.0 – August 2, 2013

Version 1.1 – July 31, 2015

- Updated Junction / Solder Point
- Updated Luminous Intensity
- Updated IF Condition for Dominant Wavelength, Peak Wavelength, Spectral Half Width
- Updated Luminous Intensity Bin Table
 - Updated Tolerance in notes
- Updated Color Bin Table
- Updated Page 4 notes
- Updated Page 9 notes



American Opto Plus LED Corp.

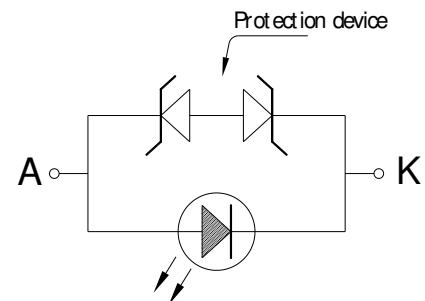
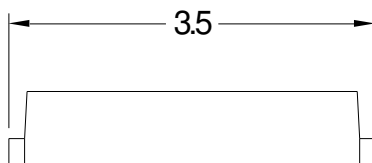
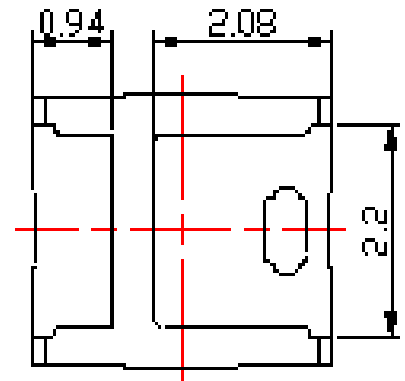
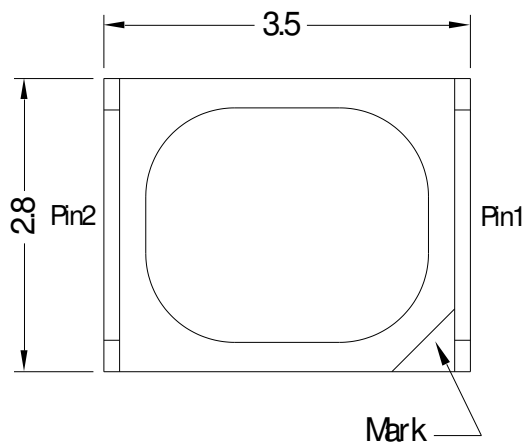
L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

FEATURES:

- High Luminous Output Function Pure Green SMD LED (InGaN)
- PLCC-2 3.5 x 2.8mm standard package with heat sink and protection device
- High reliability package
- Wide viewing angle 120 degree
- Available in 8mm carrier tape on 7 inch reel (2000 pieces)

PACKAGE OUTLINES:



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

NOTES:

1. All dimensions are in 0.2mm;
2. Electrical Connection between all Cathodes is Recommended



American Opto Plus LED Corp.

L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Max Rating	Unit
DC Forward Current	I_F	250	mA
Peak Pulsed Forward Current	I_{FP}	300	mA
Reverse Voltage	V_R	--	V
Junction Temperature	T_j	125	°C
Junction / Solder Point	$R_{th J_s}$	45	°C/W
Junction / Ambient	$R_{th J_a}$	80	°C/W
Power Dissipation	P_d	875	mW
Operating Temperature Range	T_{OPR}	-30 ~ +100	°C
Storage Temperature	T_{STG}	-40 ~ +100	°C
Solder Temperature	T_{SOL}	265°C for 10 sec	

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

OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F = 150mA$	--	2.8	3.5	V
Luminous Flux	Φ_V	$I_F = 150mA$	--	27	--	lm
Luminous Intensity	I_V	$I_F = 150mA$	7200	12000	21000	mcd
Dominant Wavelength	λ_D	$I_F = 150mA$	525	535	545	nm
Peak Wavelength	λ_P	$I_F = 150mA$	--	535	--	nm
Spectral Half Width	$\Delta\lambda_{1/2}$	$I_F = 150mA$	--	37	--	nm

Notes: Luminous Intensity Tolerance: ±10%
Please refer to CIE 1931 Chromaticity Diagram



American Opto Plus LED Corp.

L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

LUMINOUS INTENSITY BIN TABLE

IF=150mA

Rank name	Min (mcd)	Max (mcd)
X	7200	9300
Y	9300	12000
Z	12000	15700
ZA	15700	21000

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

COLOR BIN TABLE

IF=150mA

Rank name	Min (nm)	Max (nm)
1	525	530
2	530	535
3	535	540
4	540	545

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

Note:

1. One delivery will include several color ranks and I_V ranks of products.
The quantity-ratio of the different rank is decided by AOP.
2. Bin Name typed on the Label: I_V Rank + Color Rank + VF Rank.
For example, **Bin X2A means I_V : 7200~9300mcd and Color: 530~535nm and VF: 2.8~2.9V.**
3. AOP has the right to update the information without notice.
Please confirm the spec details before placing an order.



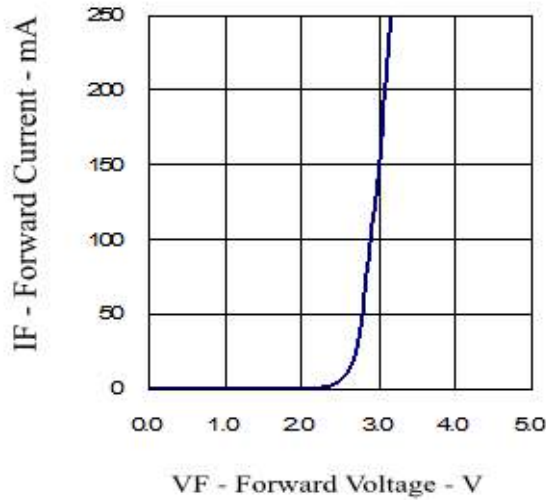
American Opto Plus LED Corp.

L955T-UPGC-Z

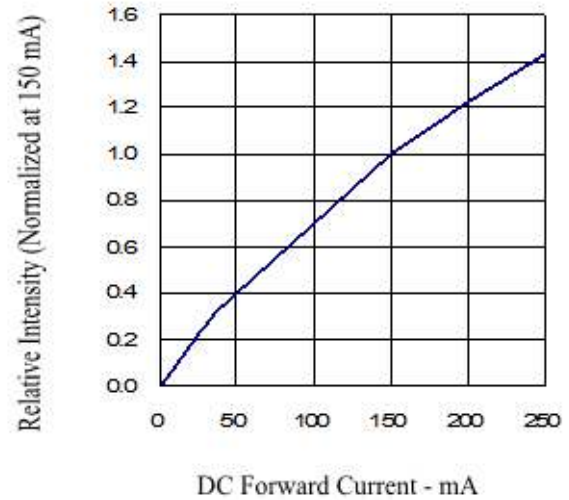
3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

OPTICAL CHARACTERISTIC CURVES

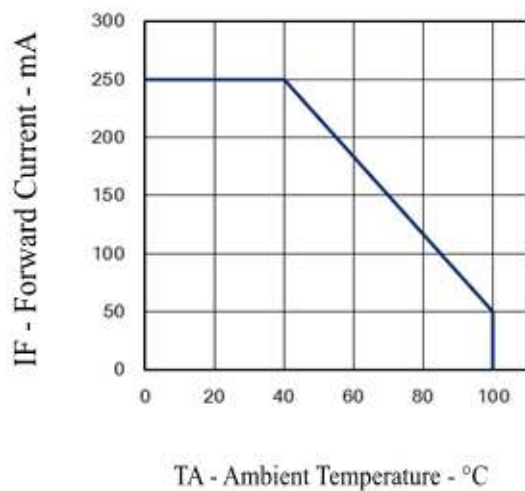
Forward Current vs. Forward Voltage



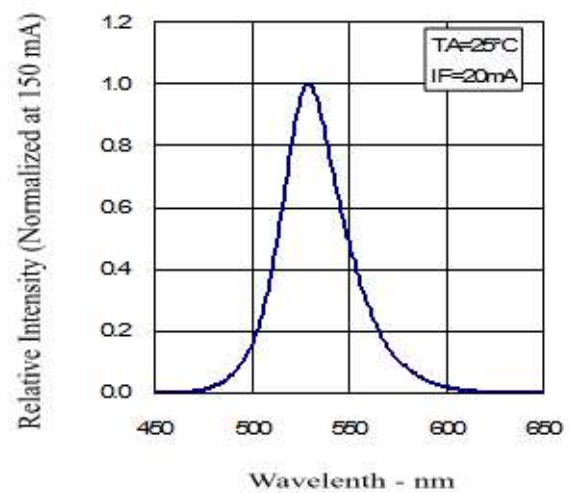
Relative Intensity vs. Forward Current



Forward Current vs. Ambient Temperature



Relative Intensity vs. Wavelength



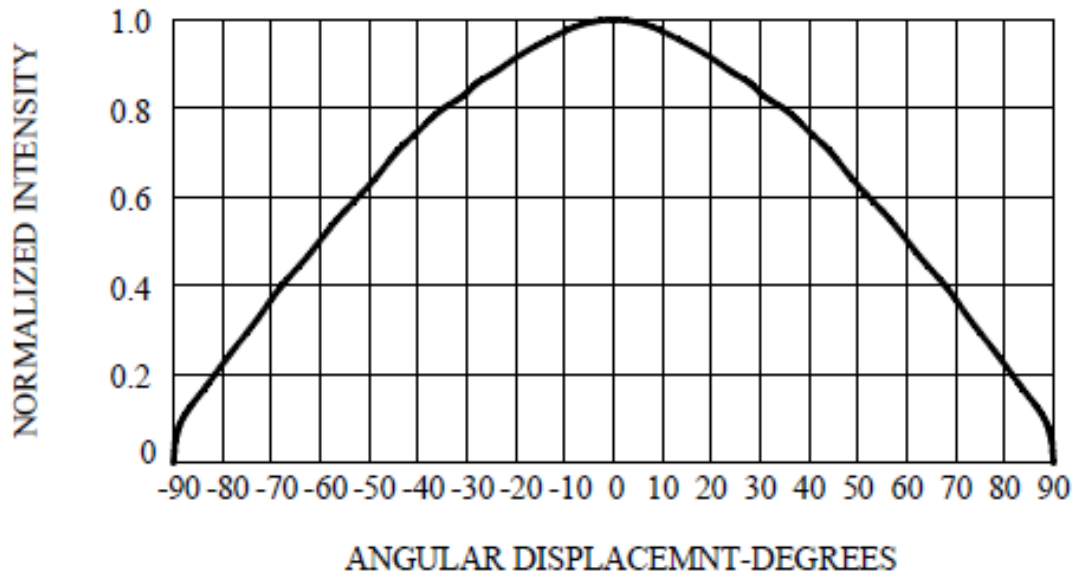


American Opto Plus LED Corp.

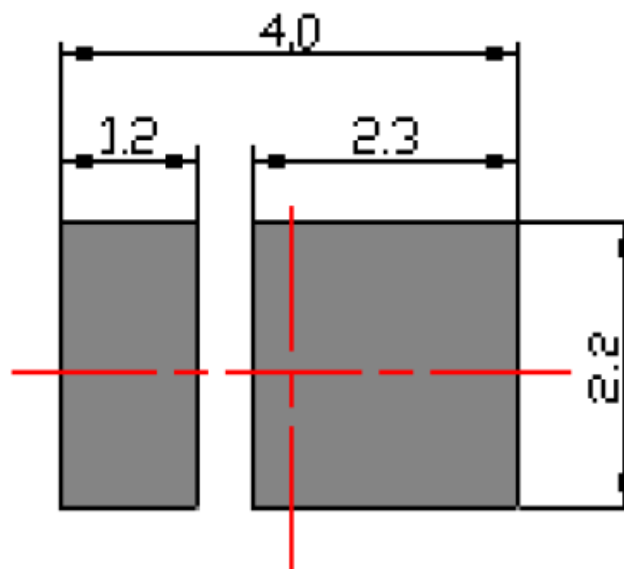
L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

RADIATION PATTERN



RECOMMENDED SOLDERING PAD PATTERN



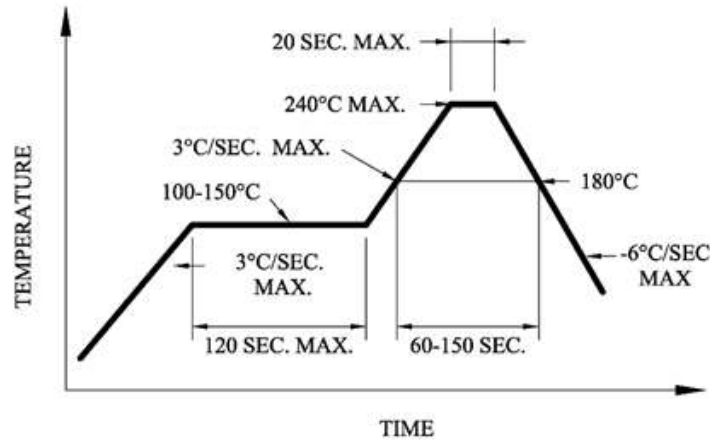


American Opto Plus LED Corp.

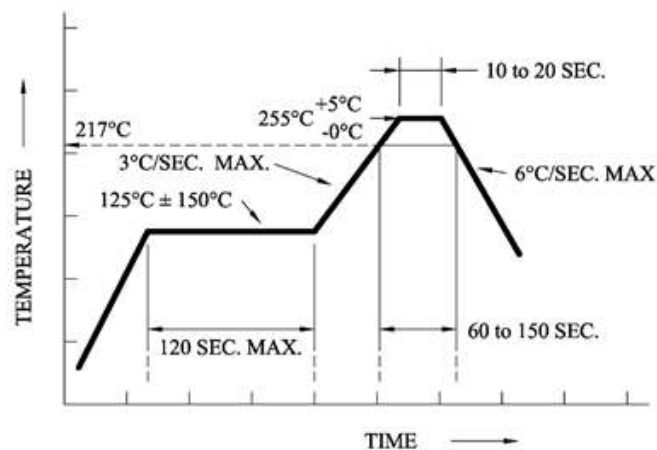
L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

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.

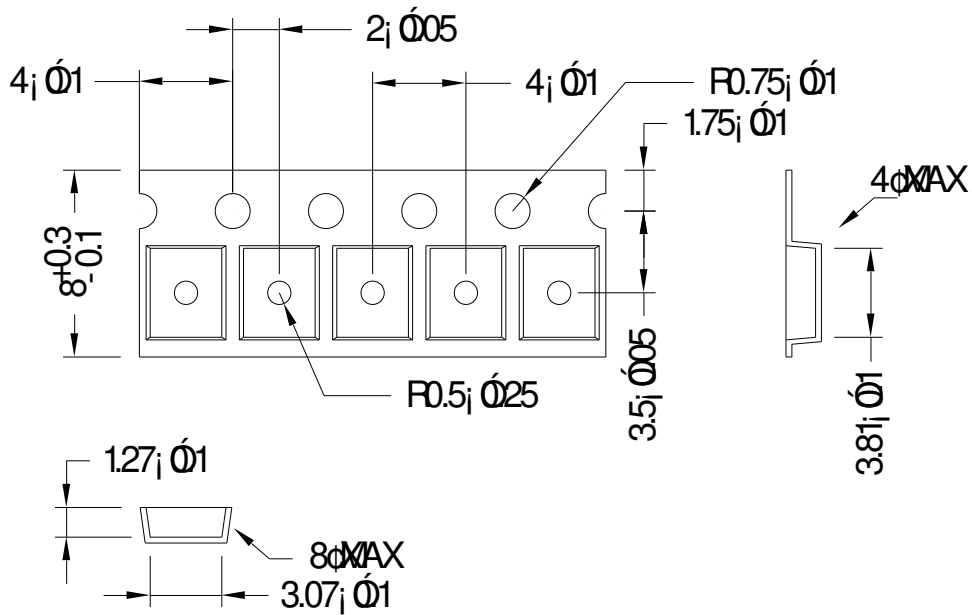


American Opto Plus LED Corp.

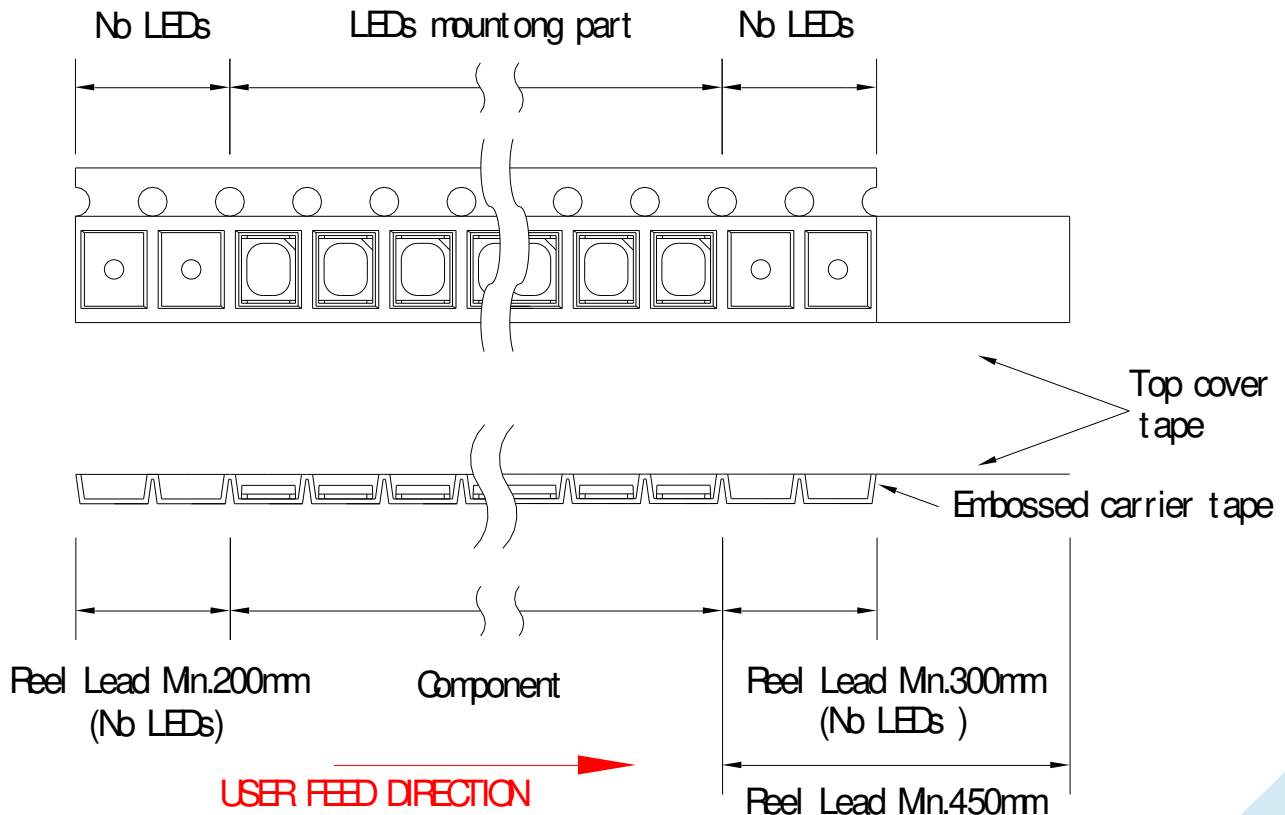
L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

TAPE DIMENSIONS



TAPE LEADER AND TRAILER DIMENSION



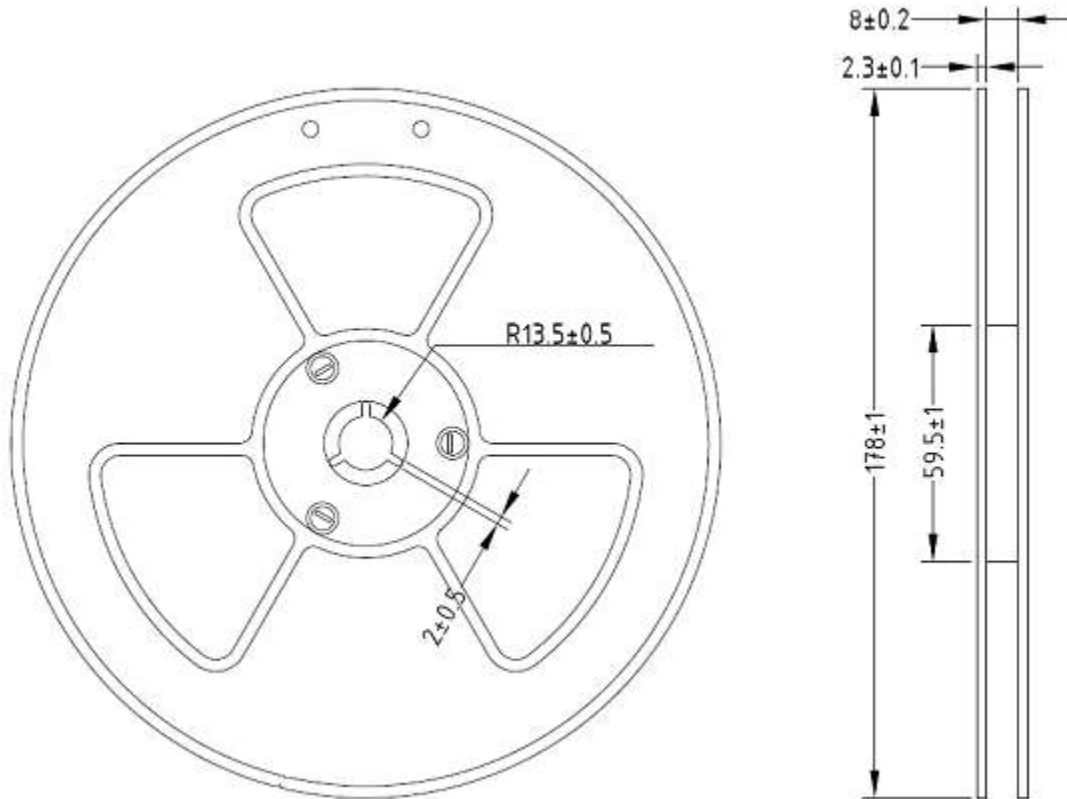


American Opto Plus LED Corp.

L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

REEL DIMENSION



Note: Baking is required under the following conditions:
The pack has been open for more than 48 hours.
Baking recommended conditions.
 60 ± 5 °C for 20 hours.



American Opto Plus LED Corp.

L955T-UPGC-Z

3.5 x 2.8 x 0.7mm High Output Pure Green PLCC-2

MOISTURE SENSITIVITY

AOP's SMD LEDs are shipped in sealed, moisture-barrier bags (MBB) designed for long shelf life. If SMD LED has exposed with moist environments before soldering, this may cause damage to SMD LED during soldering (reflow) operation.

STORAGE/ FLOOR TIME

Condition	Temperature(C)	Humidity(RH)	Period of Time
Before Open	30	60	6 month from shipping date
After Open	30	60	Within 48 hours

- MSL of this product are MSL4, please see IPC/JEDEC STD020D for more detail.
- LEDs reach floor time may be damaged while soldering/ reflow processing, please discard the LED.
- If RH indicator card show 60% RH when unseal the package, please bake/ discard the LED.

RESEAL

- AOP's aluminum MBB may reuse as to reseal the unused LED if MBB has not been damaged or had any holes on it.
- Moisture absorbent material (silica gel) may be reuse if it does not become pink.
- Proper resealed LED's floor time will not reset, only stop counting until open.
- If RH indicator card show 60% RH when open the package, please bake/ discard the LED.