



SURFACE MOUNT LED TAPE AND REEL



Lead-Free Parts

PRELIMINARY

This is just a preliminary design
to let you evaluate the concept

AM-LG-2835URFS-T150

DATA SHEET

DOC. NO : IMQW0905-AM-LG-2835URFS-T150

REV. : A

DATE : 17 - Oct. - 2018

Features:

1. White SMD with PLCC 2 package.
2. Top view LED Package & Dimensions : 3.5x2.8x0.65 (unit:mm)
3. Luminous color:Red(Wd:625nm)
4. Viewing angle:120°
5. Compliant with RoHS and REACH

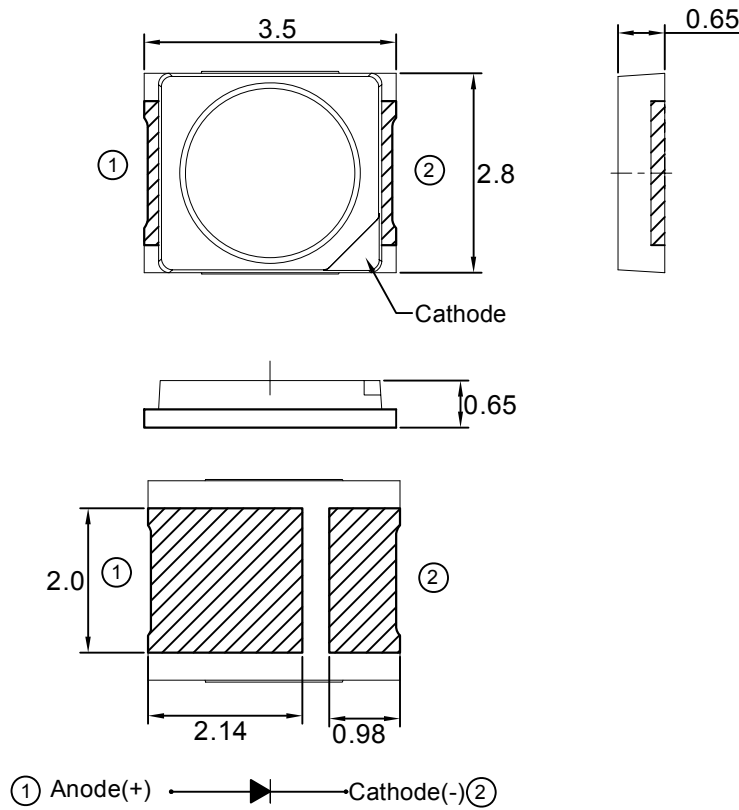
Application:

1. Automotive parts
2. Backlight
3. Interior and Exterior Illumination
4. General applications

Device Selection Guide:

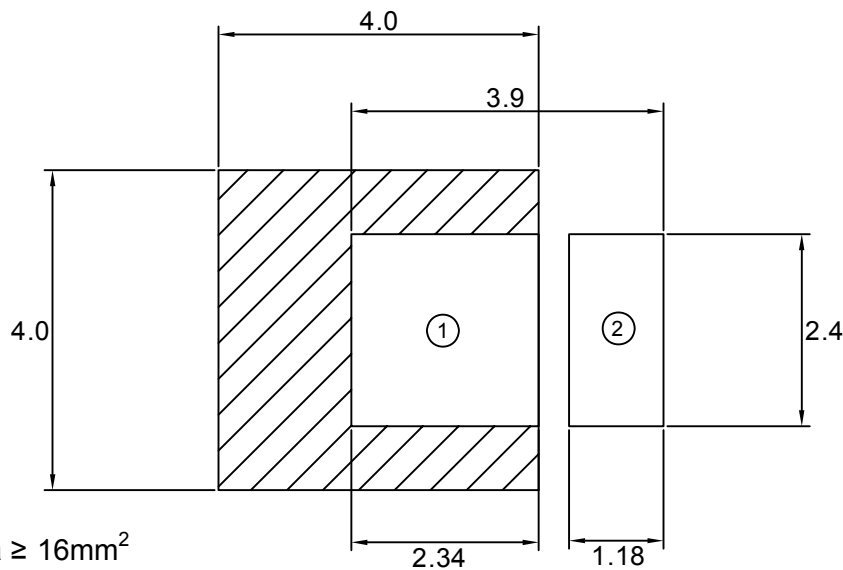
PART NO	MATERIAL	COLOR	
		Emitted	Lens
AM-LG-2835URFS-T150	AlGaInP	Red	Water Clear

Package Dimensions



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

Recommended Soldering Pad Dimensions



Cu-area $\geq 16\text{mm}^2$
pad design for
improved heat
dissipation

MCPCB Is Recommend

Note : The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit=mm.

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	UNIT
Forward Current	IF	200	mA
Peak Forward Current Duty 1/10@10KHz	IFP	400	mA
Power Dissipation	PD	610	mW
Reverse Current @12V	Ir	5	μA
Electrostatic Discharge	ESD	2000	V
Operating Temperature	Topr	- 40 ~ + 100	°C
Storage Temperature	Tstg	- 40 ~ + 100	°C
Thermal resistance	Rth j-s	50	°K/W

Typical Electrical & Optical Characteristics (Ta=25°C)

Items	Symbol	Min.	Typ.	Max.	UNIT	CONDITION
Luminous Intensity	Iv	16	----	28	lm	IF=150mA
Dominant Wavelength	λD	----	625	----	nm	IF=150mA
Spectral Line Half-Width	Δλ	----	16	----	nm	IF=150mA
Forward Voltage	V _F	1.75	----	3.05	V	IF=150mA
Viewing Angle	2θ 1/2	----	120	----	deg	IF=150mA

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.
2.The luminous intensity data did not including ±15% testing tolerance.
3. The dominant wavelength data did not including ±1nm testing tolerance

Luminous Intensity Classification

BIN CODE	Iv(lm) at150mA	
	Min.	Max.
F16D	16	18
F18D	18	20
F20D	20	22
F22D	22	24
F24D	24	26
F26D	26	28

Forward Voltage Classification

BIN CODE	Vf(v) at 150mA	
	Min.	Max.
1	1.75	1.90
2	1.90	2.05
3	2.05	2.20
4	2.20	2.35
5	2.35	2.50
6	2.50	2.65
7	2.65	2.80
8	2.80	2.95
9	2.95	3.05

Typical Electro-Optical Characteristics Curve

Fig.1 Forward current vs. Forward Voltage

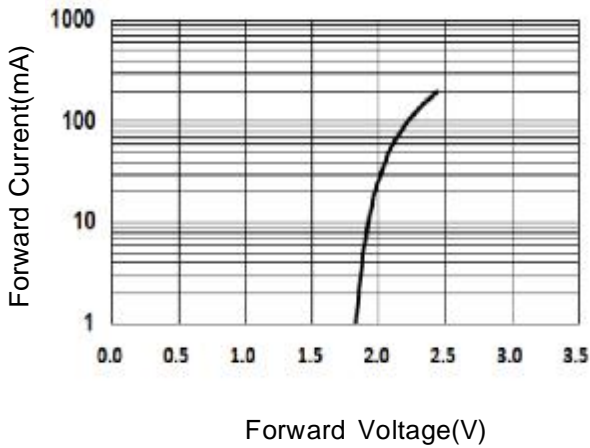


Fig.2 Luminous Intensity vs. Forward Current

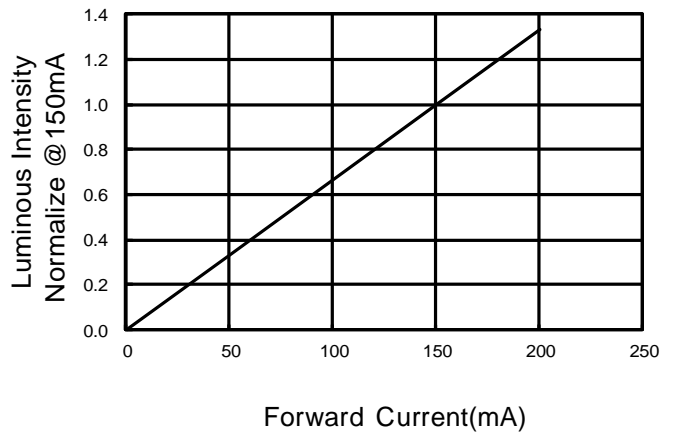


Fig.3 Forward Current vs. Temperature

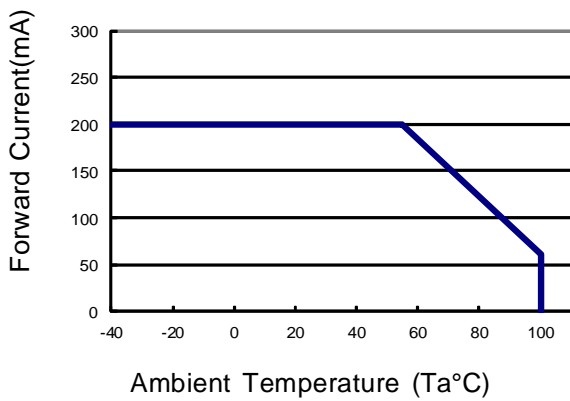


Fig.4 Luminous Intensity vs. Temperature

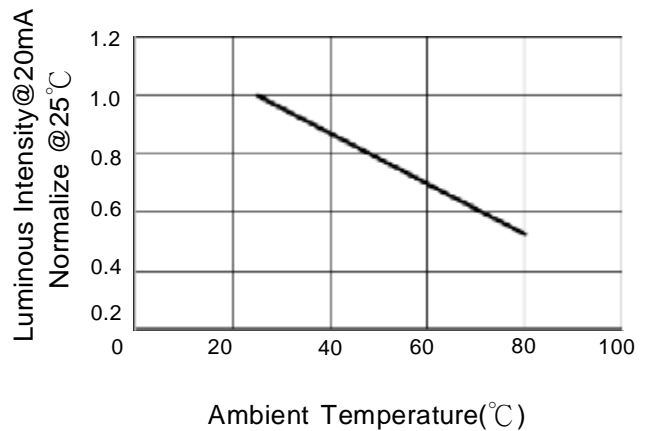


Fig.5 Relative Intensity vs. Wavelength

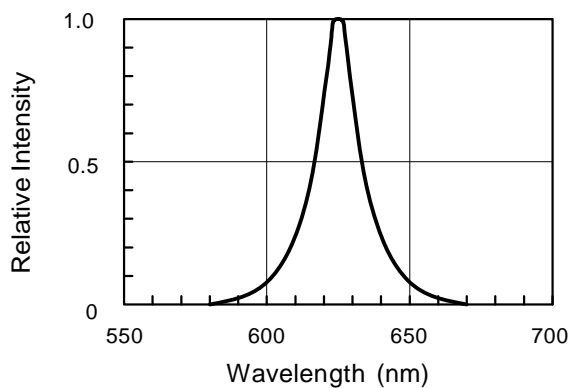
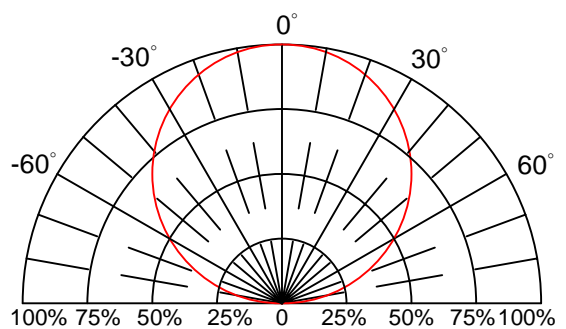
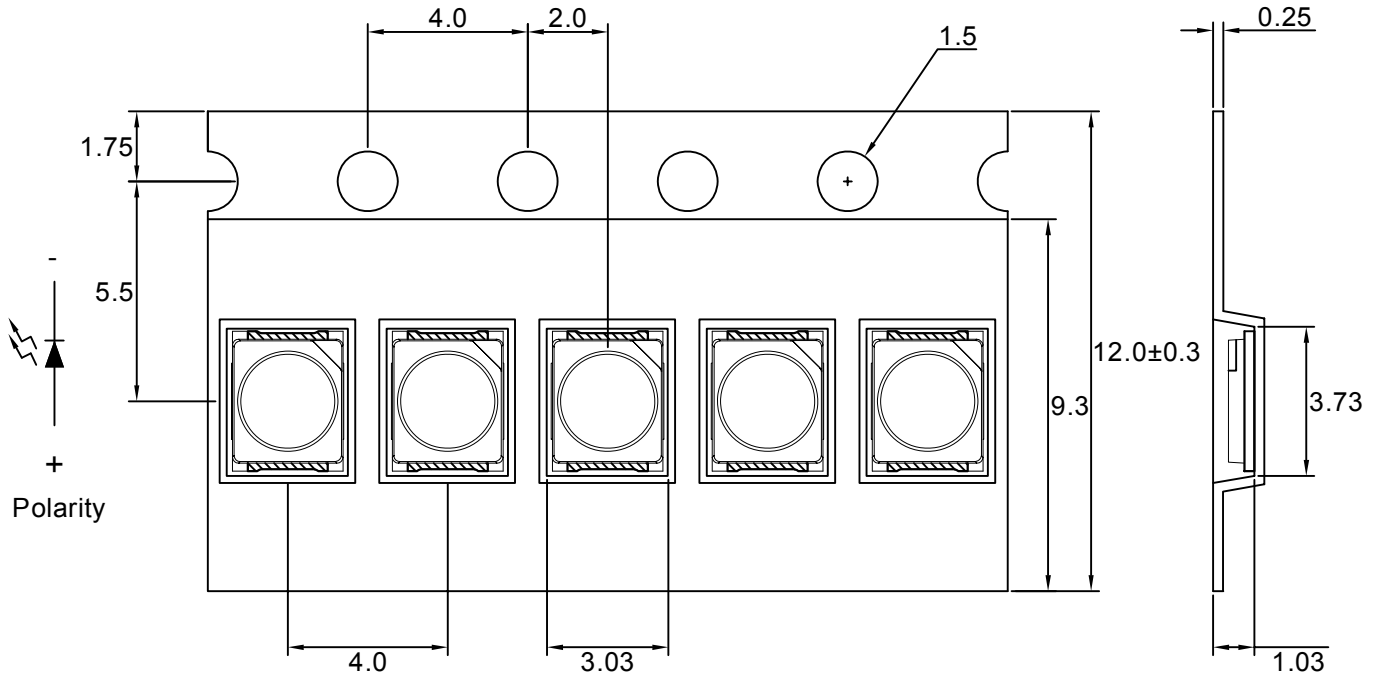


Fig.6 Directive Radiation

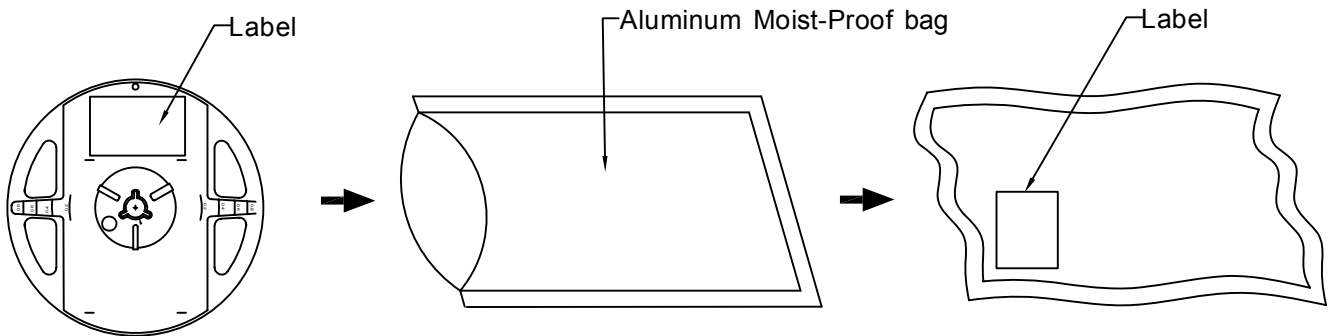


Carrier Type Dimensions









Note : The tolerances unless mentioned is $\pm 0.1\text{mm}$, Angle ± 0.5 . Unit=mm.

Packing Specifications



Part No.	Description	Quantity/Reel
AM-LG-2835URFS-T150	12.0mm tape,7"reel	2000 PCS

Label Explanation

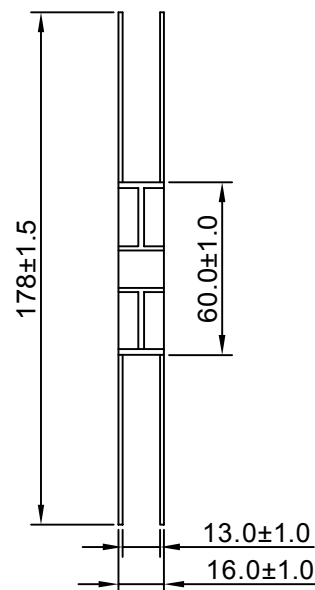
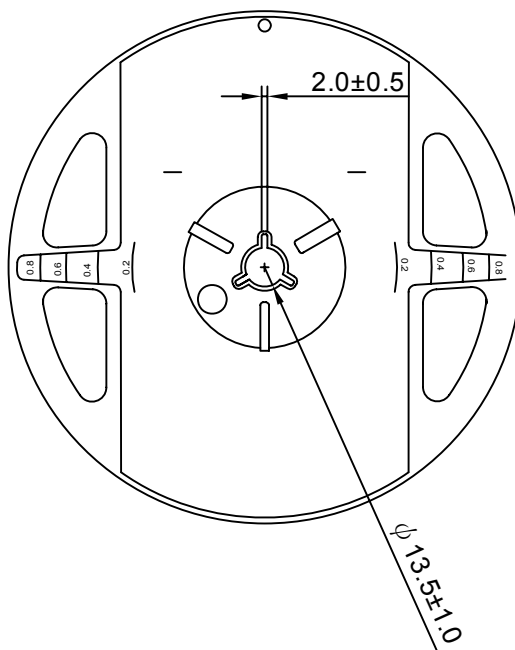
	LIGITEK ELECTRONICS CO., LTD.			
PART :		AM-LG-2835URFS-T150		
LOT :		GS11490168		
QTY(PCS):		2000		
BIN/HUE :		F16D		VF: 2.2-2.35

BIN : Luminous Flux

HUE : Dominant Wavelength

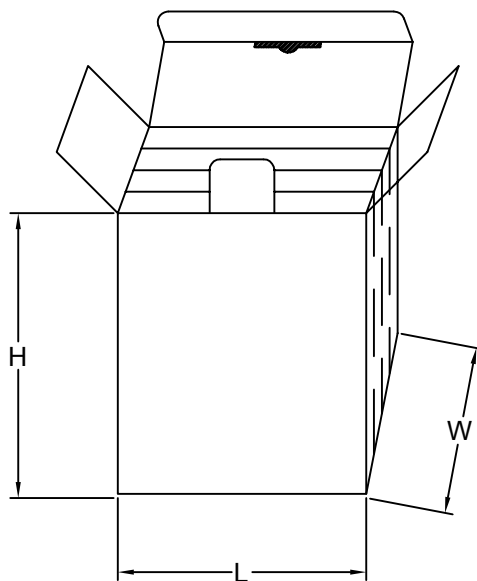
VF : Forward Voltage

Reel Dimensions

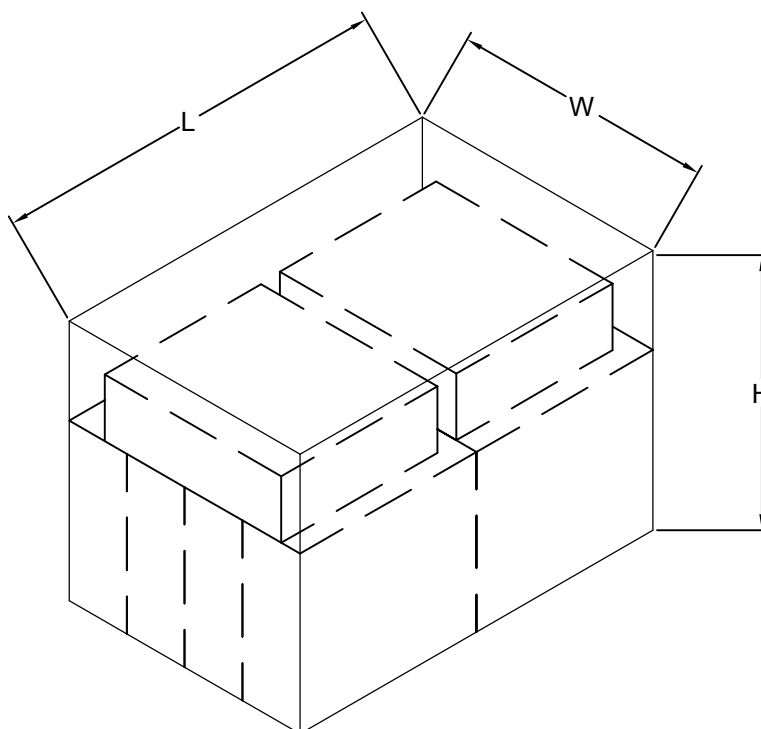


Box Explanation

1. 4 BAG / INNER BOX
2. INNER BOX SIZE : L X W X H 23cm X 8.5cm x 26cm

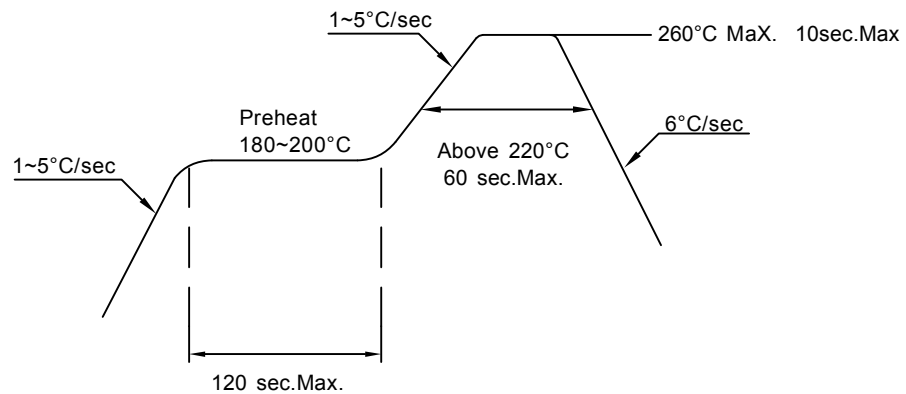


3. 10 INNER BOXES / CARTON
4. CARTON SIZE : L X W X H 58cm X 34cm x 35cm



Recommended Soldering Conditions**1. Hand Solder**

Basic spec is $\leq 320^{\circ}\text{C}$ 3 sec one time only.

2. PB-Free Reflow Solder**Note:**

- 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.

Precautions For Use:**Storage time:**

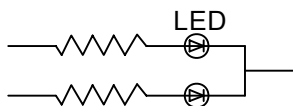
1. Calculated shelf life before opening is 12 months at $< 30^{\circ}\text{C}$ and $< 90\%$ relative humidity (RH)
2. After bag is opened, devices which will be subjected to reflow soldering or other high temperature processes must be
 - a) Assembled within 168 hours in an environment of $\leq 30^{\circ}\text{C} / 60\%$ RH, or
 - b) Stored at ambient of 10% RH or less
3. Devices are required baking before assembly if:
 - a) Humidity Indicator Card reads $>10\%$ (for level 2a -5a) or $>60\%$ (for level 2) at ambient temperature $23\pm 5^{\circ}\text{C}$
 - b) 2.a) or 2.b) doesn't meet
4. If baking is required, devices should be baked for >72 hours at $60\pm 5^{\circ}\text{C} / 5\%$ RH. Performing baking only once, and using the baked devices within 72 hours.
MSL LEVEL 3

Drive Method:

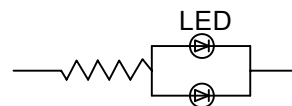
LED is a current operated device, and therefore, requires some kind of current limiting incorporated into the driver circuit. This current limiting typically takes the form of a current limiting resistor placed in series with the LED.

Consider worst case voltage variations than could occur across the current limiting resistor. The forward current should not be allowed to change by more than 40% of its desired value.

Circuit model A



Circuit model B



(A) Recommended circuit.

(B) The difference of brightness between LED could be found due to the VF-IF characteristics of LED.

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.