



BRIGHTTEK
BRIGHTTEK (EUROPE) LIMITED

Brighten Up The World With LED!



ISO/TS 16949:2009



BS EN ISO 14001:2004



QC 080000 IECQ HSPM

PRODUCT DATASHEET

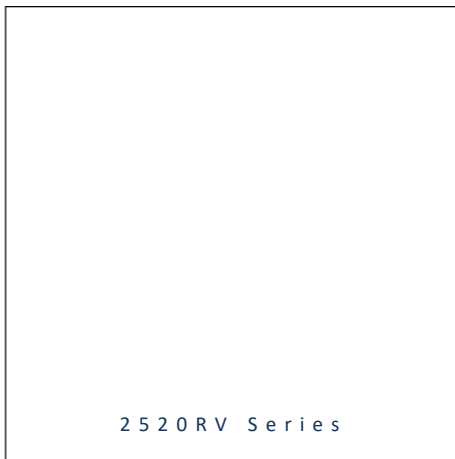


- ▶ Subminiature SMD (Reverse Mount)
- ▶ 2520RV Series
- ▶ Blue (470nm)

NOB50S36RV



Release Date: 02 December 2019 Version: A1.0



2520RV Series



FEATURES:

- **Package:** Reverse Mount Subminiature SMD
- **Forward Current:** 20mA
- **Forward Voltage (typ.):** 3.5V
- **Luminous Intensity (typ.):** 800mcd@20mA
- **Colour:** Blue
- **Wavelength:** 470nm
- **Viewing angle:** 20°
- **Materials:**
 - Die: InGaN
 - Resin: Epoxy (Water Clear)
- **Operating Temperature:** -20~+80°C
- **Storage Temperature:** -30~+100°C
- **ESD:** 500V
- **Grouping parameters:**
 - Forward voltage
 - Luminous intensity
 - Dominant Wavelength
- **Soldering methods:** Reflow
- **Preconditioning:** acc. to JEDEC Level 3
- **Packing:** 12mm tape with max.1500/reel, ø180mm (7")

APPLICATIONS:

- Backlighting
- Indication Light
- Switch light
- Dashboard

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	30	mA
Peak Forward Current Duty 1/10@10KHz	I _{FP}	100	mA
Reverse Current @5V	I _R	50	μA
Power Dissipation	PD	120	mW
Electrostatic Discharge	ESD	500	V
Operating Temperature	T _{OPR}	-20~+80	°C
Storage Temperature	T _{STG}	-30~+100	°C

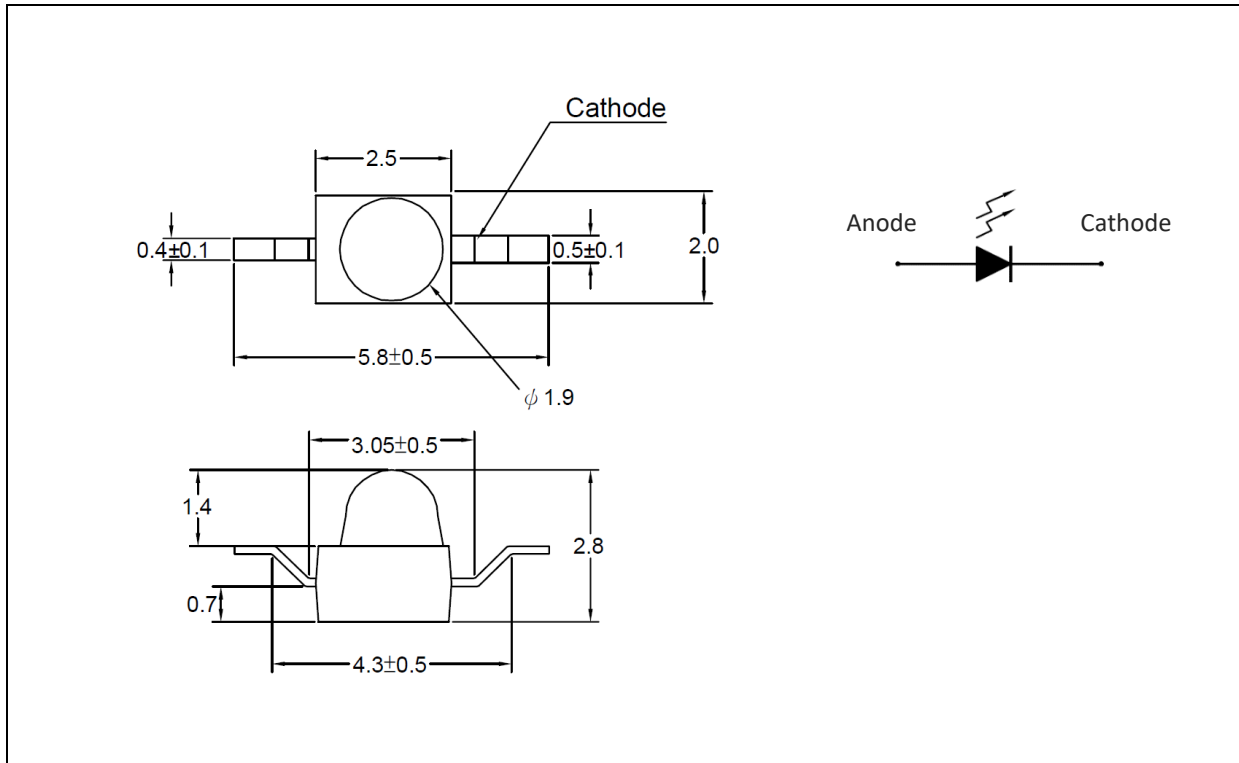
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V _F	---	3.5	4.0	V	I _F =20mA
Luminous Intensity	I _v	300	800	---	mcd	I _F =20mA
Dominant Wavelength	λ _D	---	470	---	nm	I _F =20mA
Spectral Line Half Bandwidth	Δλ	---	30	---	nm	I _F =20mA
Viewing Angle	2θ _{1/2}	---	20	---	deg	I _F =20mA

- Luminous intensity (I_v) ±15%, Forward Voltage (V_F) ±0.1V

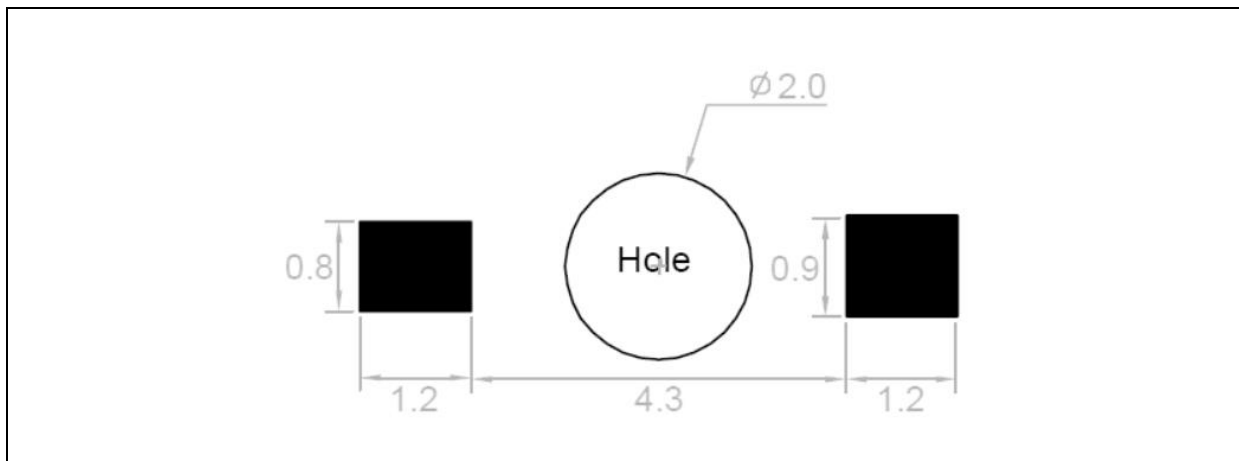
OUTLINE DIMENSION:

Package Dimension:

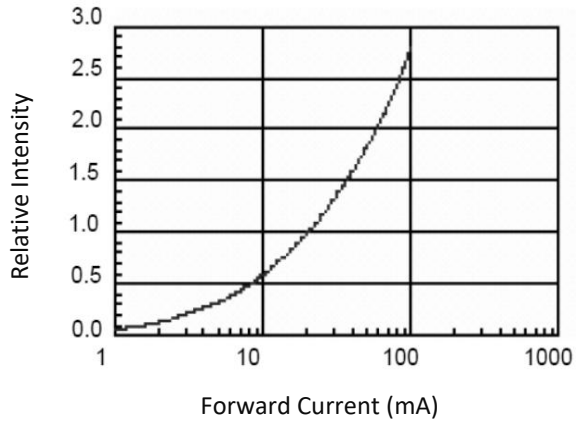
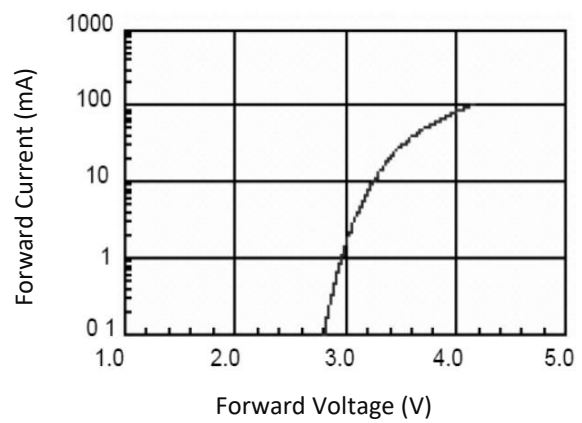
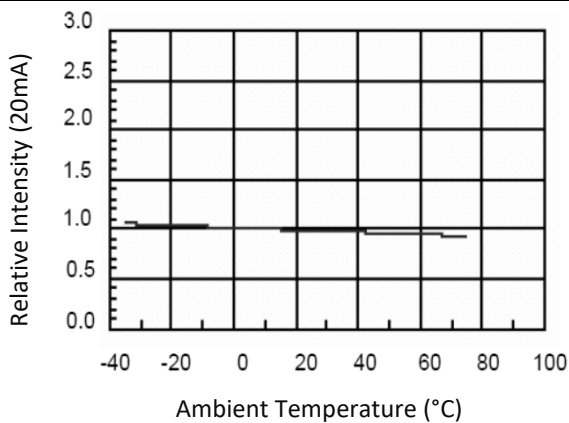
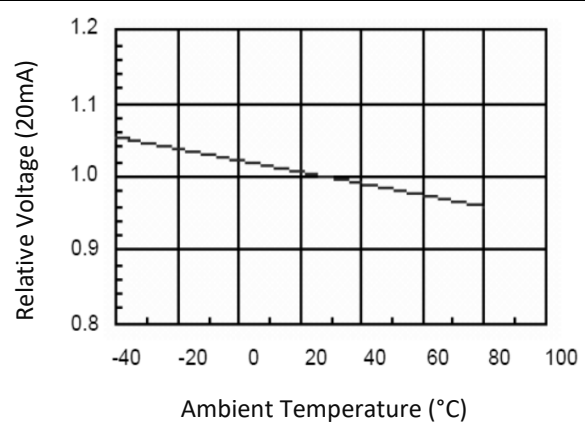
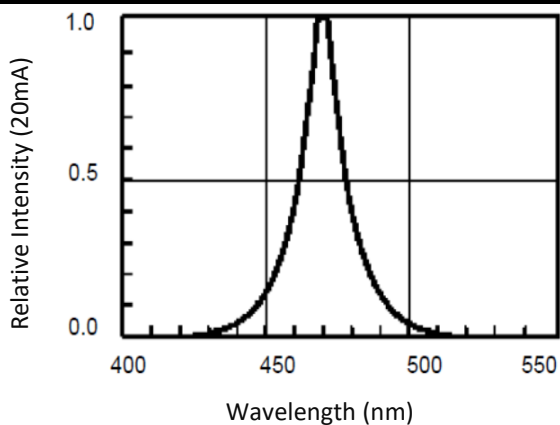
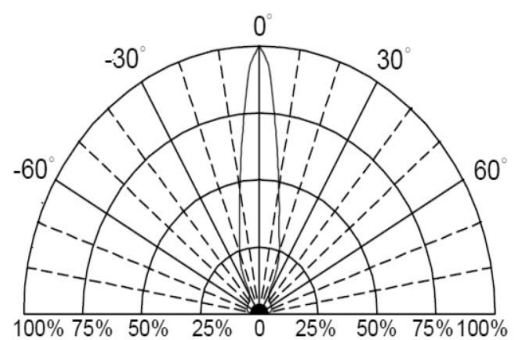


1. All dimensions are in millimetre (mm).
2. Tolerance ± 0.2 mm, unless otherwise noted.

Recommended Soldering Pad Dimension:

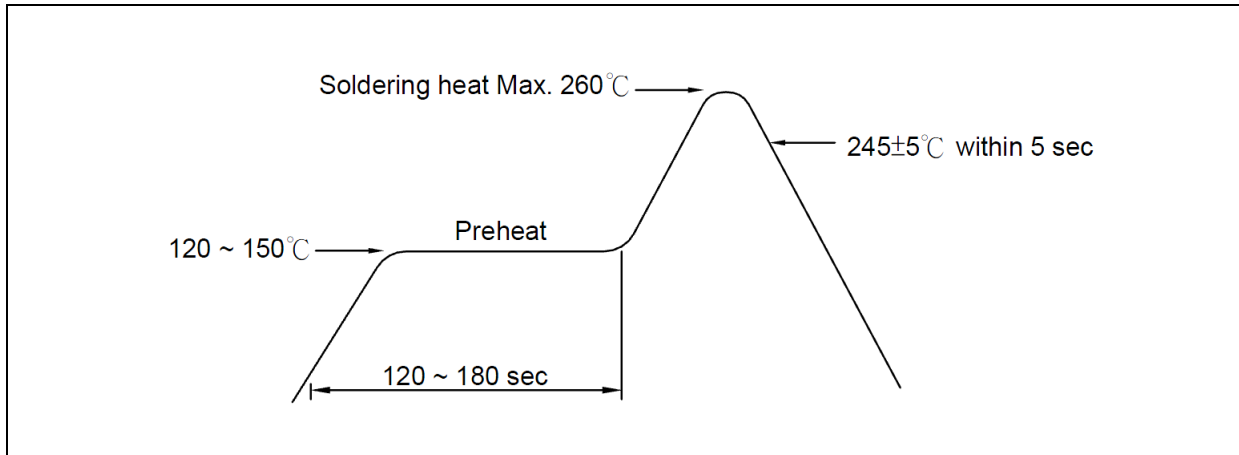


1. Dimensions are in millimetre (mm).
2. Tolerance ± 0.1 mm with angle tolerance $\pm 0.5^\circ$.

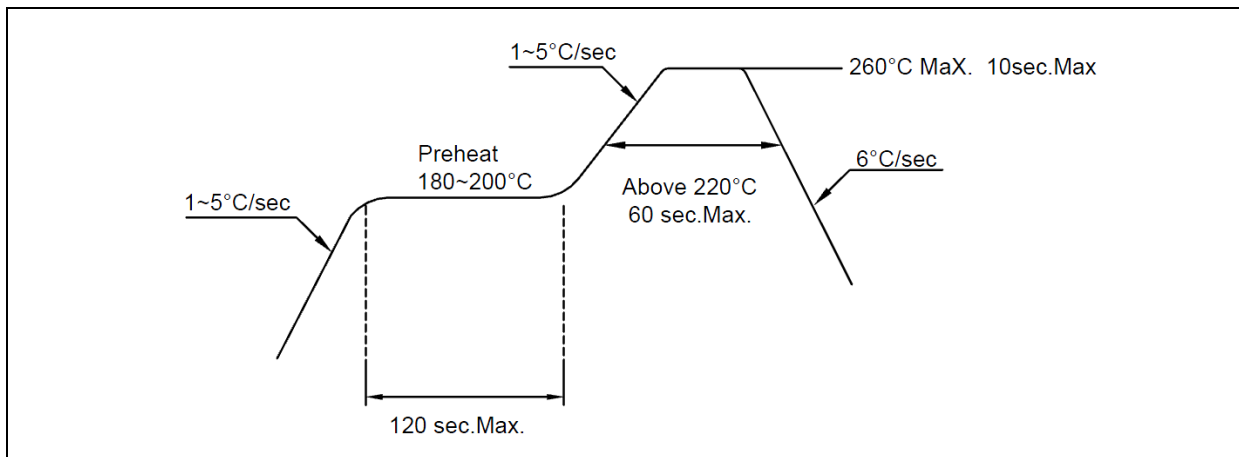
ELECTRO-OPTICAL CHARACTERISTICS:
Relative Intensity v.s. Forward Current

Forward Current v.s. Forward Voltage

Relative Intensity v.s. Temperature

Relative Forward Voltage v.s. Temperature

Relative Intensity v.s. Wavelength

Directive Radiation


RECOMMENDED SOLDERING PROFILE:

Wave Solder:



Lead-free Solder:

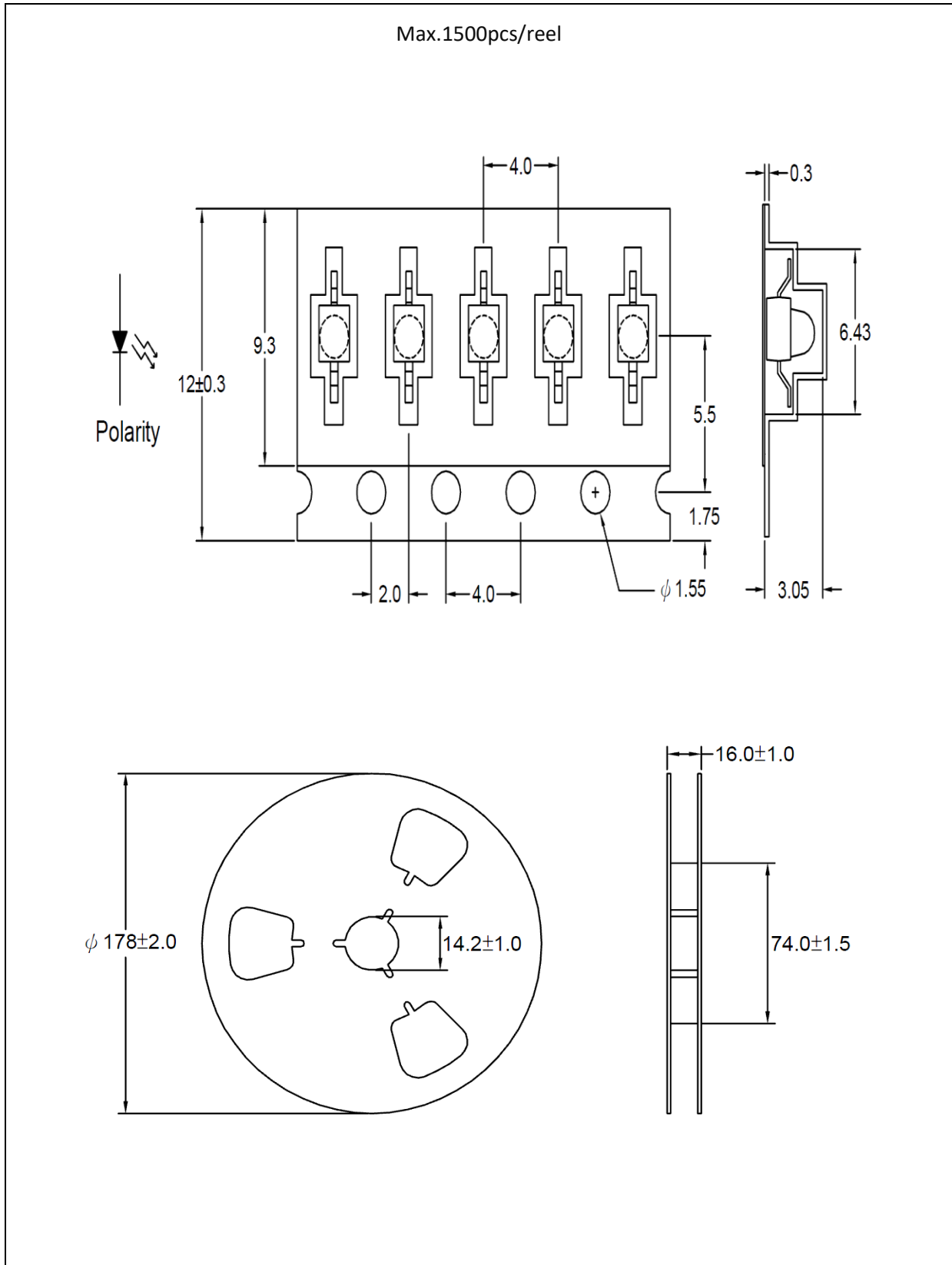


Note:

1. Maximum reflow soldering: 2 times.
2. Before, during, and after soldering, should not apply stress on the components and PCB board.

PACKING SPECIFICATION:

Reel Dimension:



PRECAUTIONS OF USE:

Storage:

It is recommended to store the products in the following conditions:

- Humidity: 60% R.H. Max.
- Temperature: 5°C~30°C (41°F ~86°F).

Shelf life in sealed bag: 12 months at 5°C~30°C and <60% R.H.

Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with desiccating agent and apply baking.

Baking:

It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs. The suggested baking conditions are as followings:

- 60±3°C x 15hrs and <5%RH, taped / reel package.

It's normal to see slight color fading of carrier (light yellow) after baking in process.

Testing Circuit:



Must apply resistor(s) for protection (over current proof).

Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED carrier / package. Avoid putting any stress force directly on to the LED lens.

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 the LED all time. All devices, equipment, machinery, work tables, and storage racks must be properly grounded.

In the events of manual working in process, make sure the devices are well protected from ESD at any time.

REVISION RECORD:

Version	Date	Summary of Revision
A1.0	02/12/2019	Datasheet set-up.