



**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

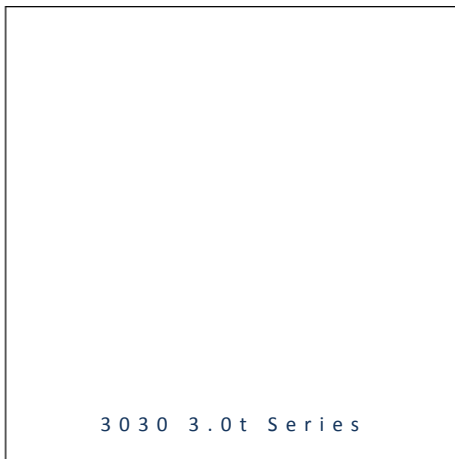


- ▶ SMC High Power
- ▶ 3030 3.0t Series
- ▶ Green (525nm)

**PRELIMINARY**  
**NOG25S52**



Release Date: 29 January 2016 Version: A1.0



3030 3.0t Series

### 3030 3.0t Series

**RoHS**  
Compliant



#### FEATURES:

- **Package:** TOP View SMC Package with Silicon Lens
- **Forward Current:** 350mA
- **Forward Voltage (typ.):** 3.2V
- **Luminous Flux (typ.):** 100lm@350mA
- **Colour:** Green
- **Wavelength:** 525nm
- **Viewing angle:** 30°
- **Materials:**
  - Die: InGaN
  - Resin: Silicon (Water Clear)
  - L/T Finish: Ag plated
- **Operating Temperature:** -40~+80°C
- **Storage Temperature:** -40~+100°C
- **Grouping parameters:**
  - Forward Voltage
  - Luminous Flux
  - Dominant Wavelength
- **Soldering methods:** Reflow
- **Preconditioning:** MSL2 according to J-STD020
- **Packing:** 12mm tape with 100pcs Min./reel, ø180mm (7")

#### APPLICATIONS:

- Decorative Lighting
- Portable Lighting
- Outdoor Lighting
- Commercial Lighting
- Architectural Lighting

## CHARACTERISTICS:

### Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
DC Forward Current	$I_F$	500	mA
Reverse Voltage	$V_R$	5	V
Reverse Current @5V	$I_R$	10	$\mu$ A
Junction Temperature	$T_j$	125	°C
Electrostatic Discharge (HBM: MIL-STD-883 C 2)	ESD	2000	V
Operating Temperature	$T_{OPR}$	-40~+80	°C
Storage Temperature	$T_{STG}$	-40~+100	°C
Soldering Temperature	$T_{SOL}$	260	°C

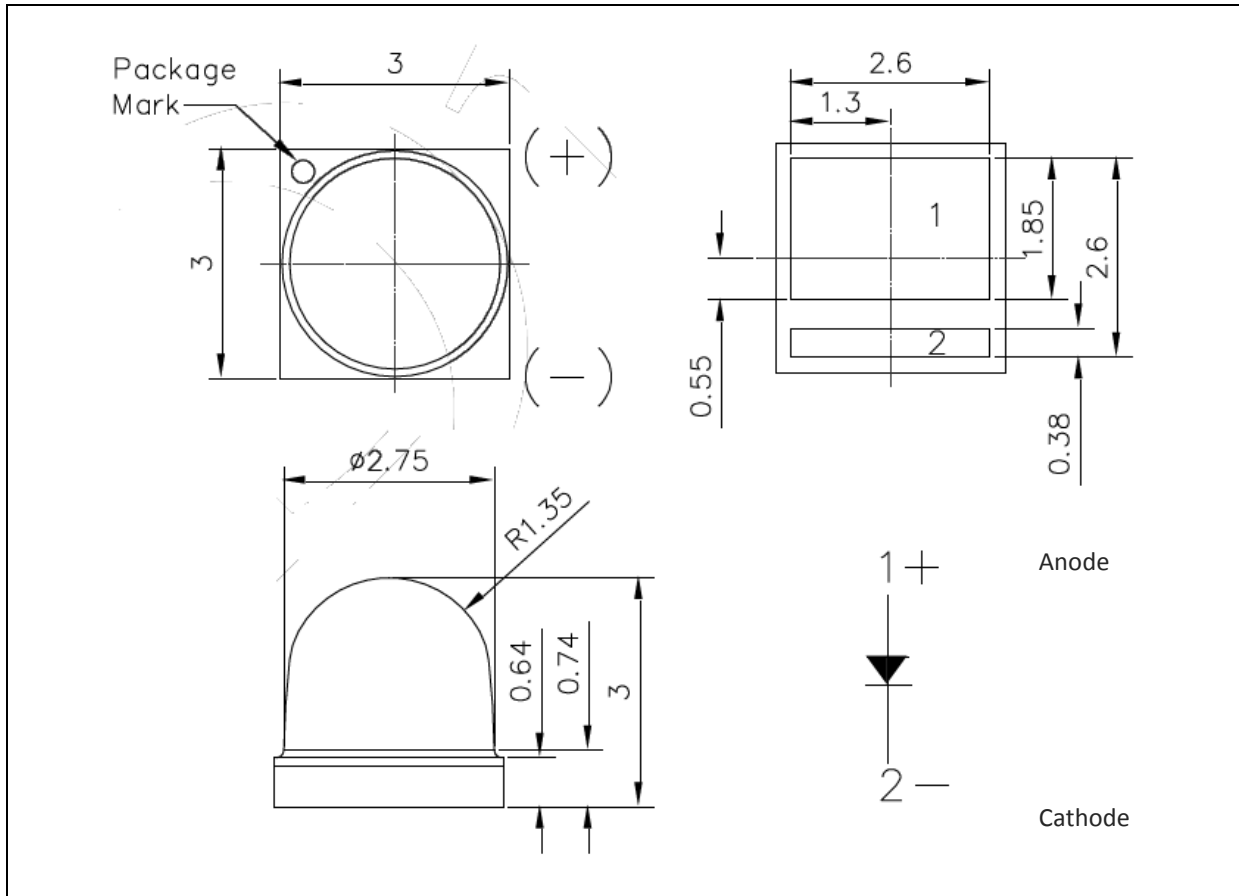
### Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	$V_F$	2.8	3.2	3.6	V	$I_F=350$ mA
Luminous Flux	$\Phi_V$	75	100	120	lm	$I_F=350$ mA
Dominant Wavelength	$\lambda_D$	520	---	530	nm	$I_F=350$ mA
Viewing Angle	$2\theta_{1/2}$	---	30	---	deg	$I_F=350$ mA

1. Luminous flux ( $\Phi_V$ )  $\pm 7\%$ , Forward Voltage ( $V_F$ )  $\pm 0.05$ V, Viewing angle( $2\theta_{1/2}$ )  $\pm 10^\circ$

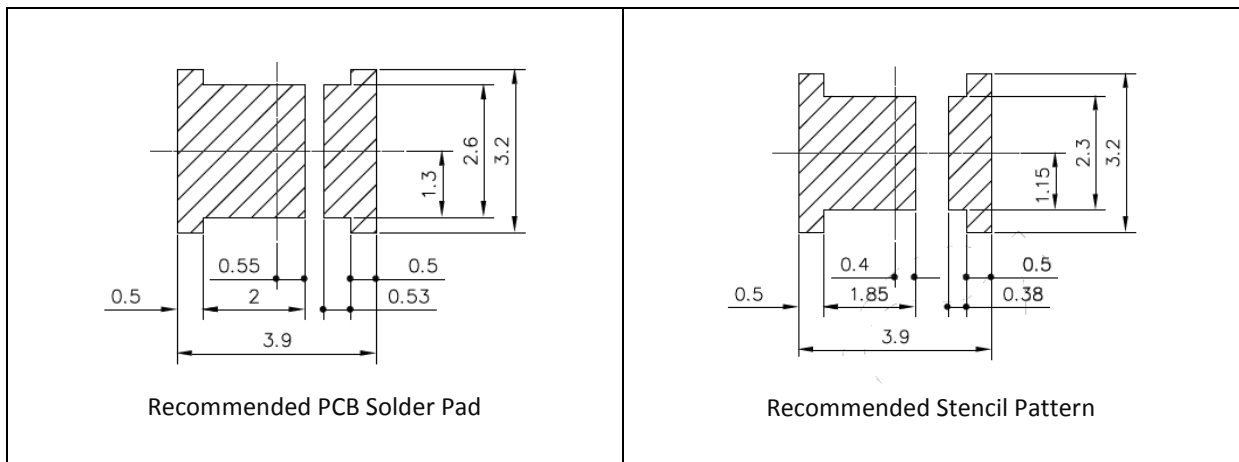
## OUTLINE DIMENSION:

Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance  $\pm 0.13$ mm, unless otherwise noted.

Recommended Soldering Pad Dimension:



1. Dimensions are in millimetre (mm).
2. Tolerance  $\pm 0.12$ mm with angle tolerance  $\pm 0.5^\circ$ .

**BINNING GROUPS:**


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 Forward Voltage Classifications ( $I_F = 350\text{mA}$ ):

Code	Min.	Max.	Unit
V2830	2.8	3.0	V
V3032	3.0	3.2	
V3234	3.2	3.4	
V3436	3.4	3.6	

 Luminous Flux Classifications ( $I_F = 350\text{mA}$ ):

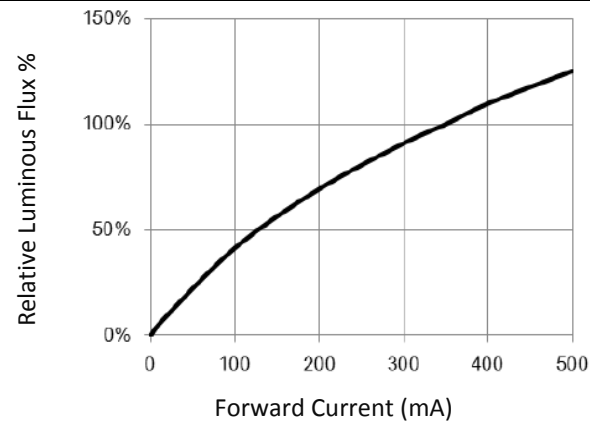
Code	Min.	Max.	Unit
B30	75	80	lm
B31	80	90	
B32	90	100	
B33	100	110	
B34	110	120	

 Dominant Wavelength Classifications ( $I_F = 350\text{mA}$ ):

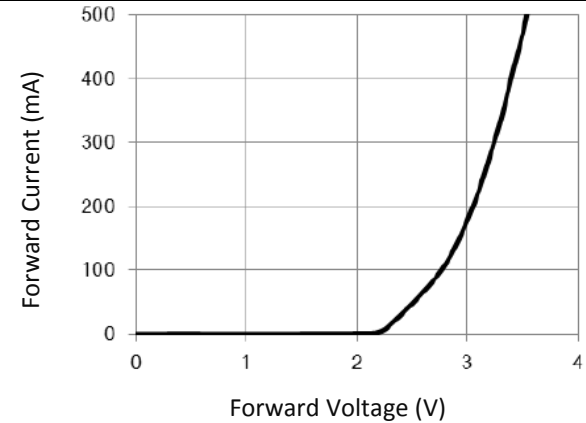
Code	Min.	Max.	Unit
G520	520	525	nm
G525	525	530	

## ELECTRO-OPTICAL CHARACTERISTICS:

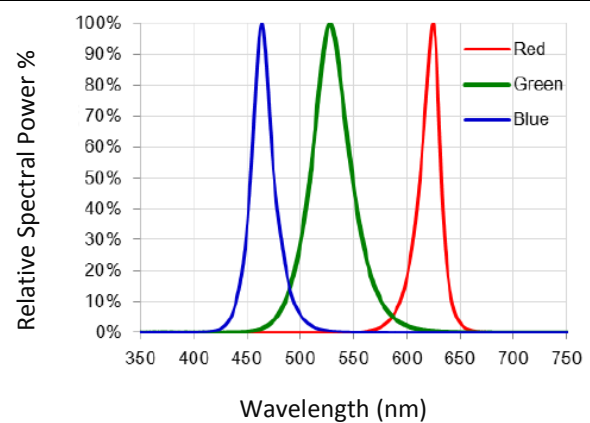
Relative Luminous Flux v.s. Forward Current



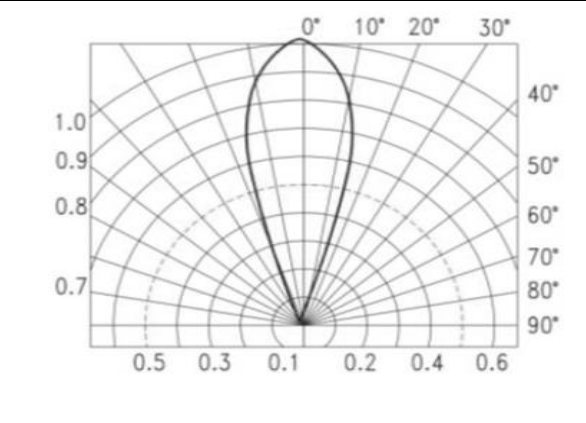
Forward Current v.s. Forward Voltage



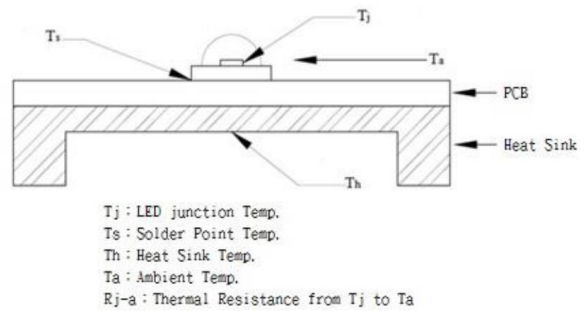
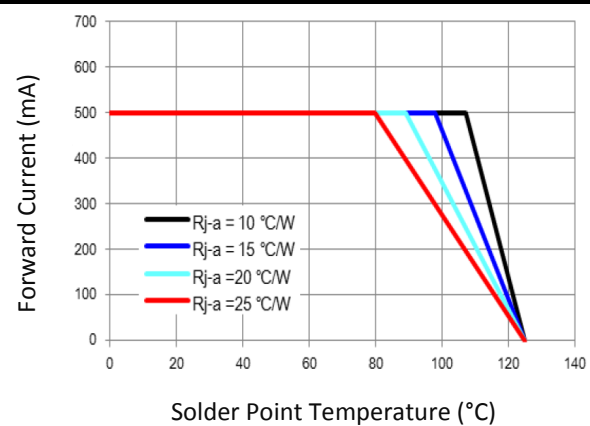
Relative Spectral Power v.s. Wavelength



Directive Radiation

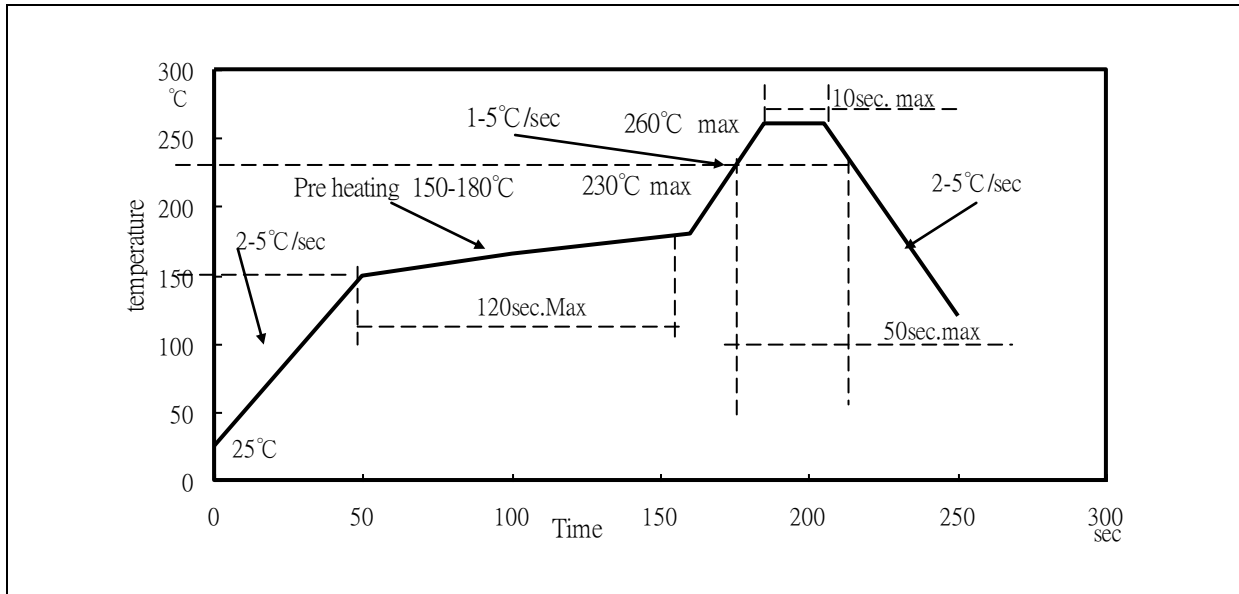


Forward Current Derating Curve



## RECOMMENDED SOLDERING PROFILE:

Reflow Lead-free Solder:

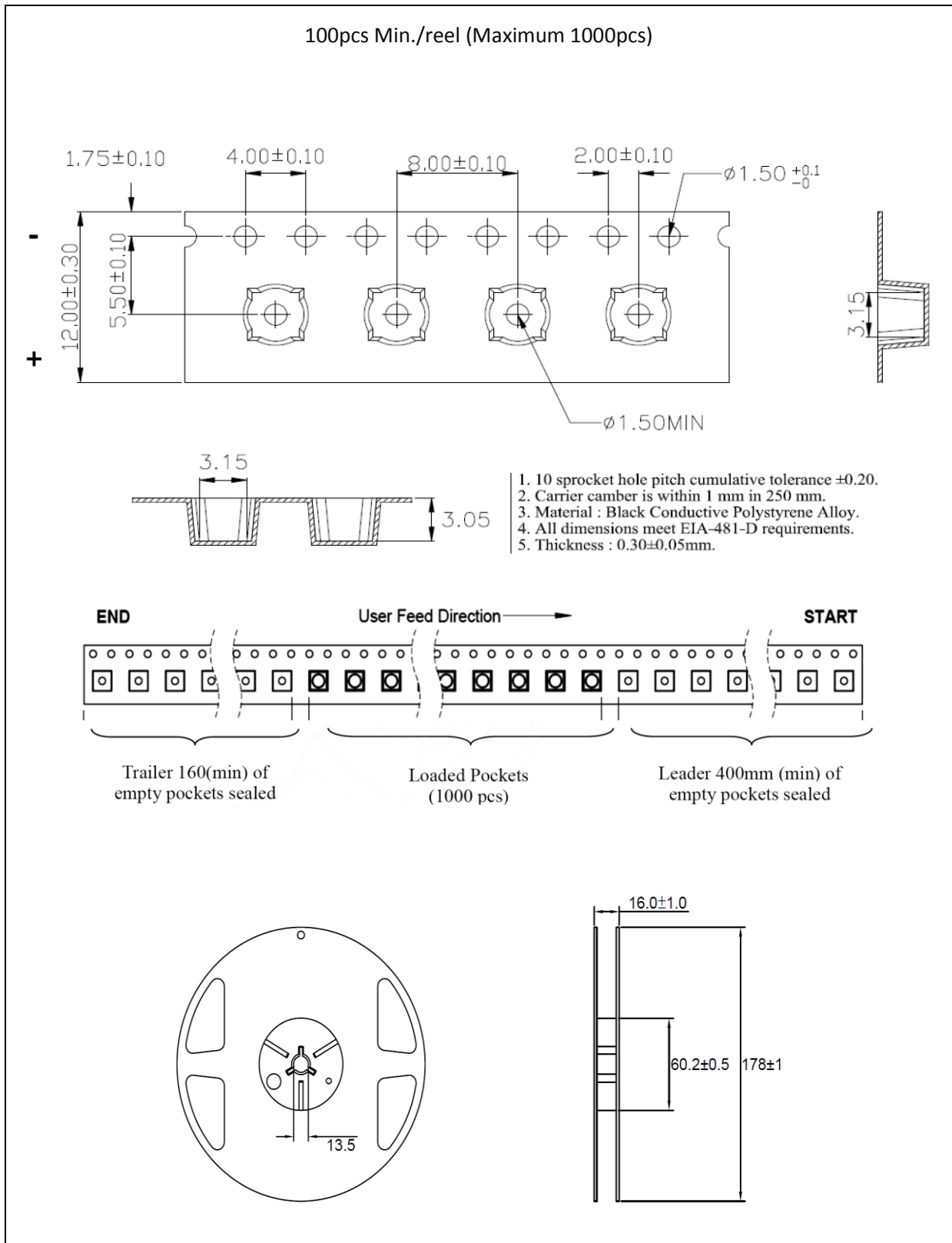


Note:

1. Maximum reflow soldering: 3 times.
2. Before, during, and after soldering, should not apply stress on the components and PCB board.

## PACKING SPECIFICATION:

Reel Dimension:



## PRECAUTIONS OF USE:

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### 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 month 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 at 60°C±5°C for 15hrs before use.

### Baking:

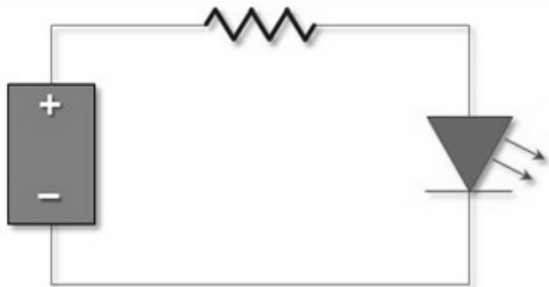
It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs.

The suggested baking conditions are as followings:

- 70±3°C x 24hrs and <5%RH, taped / reel package.
- 100±3°C x 2hrs, bulk (loose) package.
- 130±3°C x 30min, bulk (loose) 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:**

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Version	Date	Summary of Revision
A1.0	29/01/2016	Datasheet set-up.