

SAMPLE APPROVAL SHEET

DESCRIPTIONS:

- 2.0x1.25x0.7mm SMD LED
- Emitting Color:Blue
- Lens Color:Water Clear

CUSTOMER: _____

MASON P/N: **L170B-SBC**

CUSTOMER P/N: _____

CUSTOMER APPROVED SIGNATURES

APPROVED BY	CHECKED BY

PRELIMINARY SPEC

2.0x1.25mm SMD CHIP LED

PART NO: L170B-SBC BLUE



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

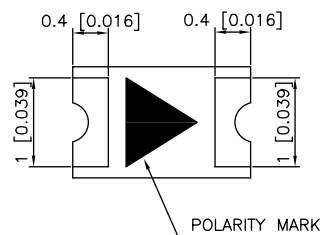
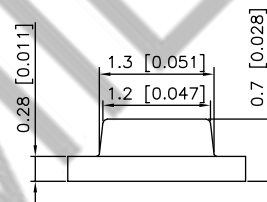
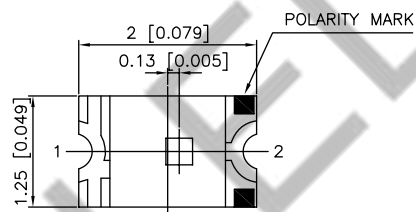
Features

- 2.0mmx1.25mm SMT LED, 0.7mm THICKNESS.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 3000PCS / REEL.
- RoHS COMPLIANT.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and back-lighting in telephone and fax.
- Flat backlight for LCD switch and symbol.

Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.15 unless otherwise noted.
3. Specifications are subject to change without notice.

◆ Device Selection Guide

Part No.	Chip		Lens color
L170B-SBC	Material	Emitted color	Water clear
	(InGaN)	BLUE	

◆ Absolute Maximum Ratings at T_A=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	95	mW
Forward Current	I _F	20	mA
Peak Forward Current*1	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-40°C To +85°C	
Storage Temperature	T _{stg}	-40°C To +85°C	

Notes:

*1: Pulse width≤0.1ms, Duty cycles≤1/10

◆ Electrical / Optical Characteristics at T_A=25°C

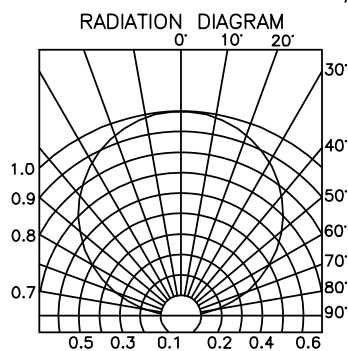
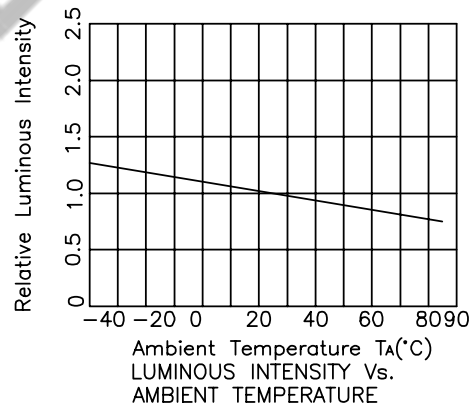
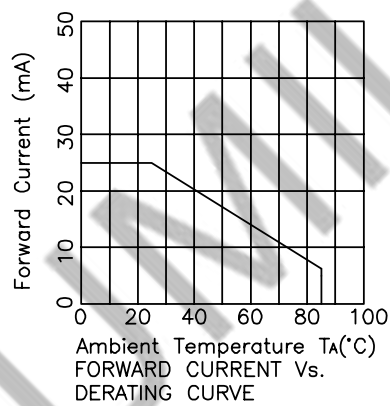
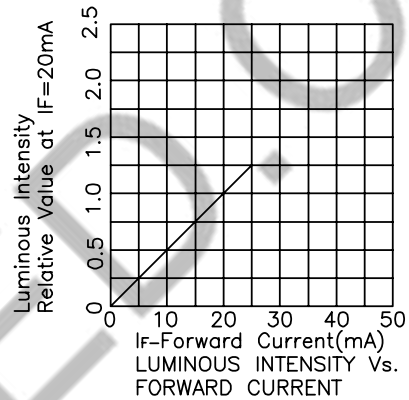
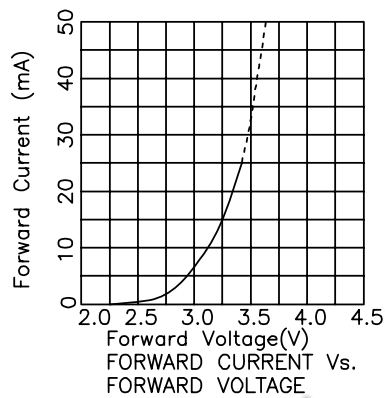
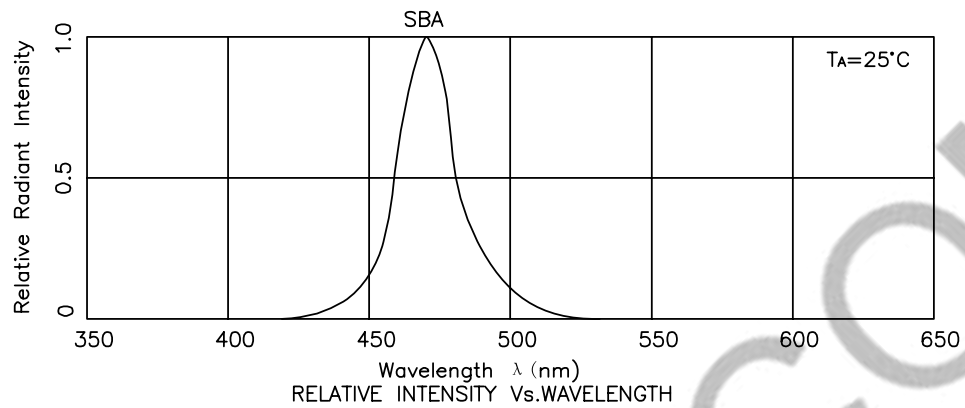
Parameter	Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	V _F	2.8	—	3.6	V	I _F =20mA
Reverse Current	I _R	—	—	10	μA	V _R =5V
Dominate Wavelength	λ _D	464	—	473	nm	I _F =20mA
Luminous Intensity	I _v	62	—	170	mcd	I _F =20mA
Viewing Angle	2θ1/2	—	120	—	Deg.	I _F =20mA

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or chromaticity), the typical accuracy of the sorting process is as follows:

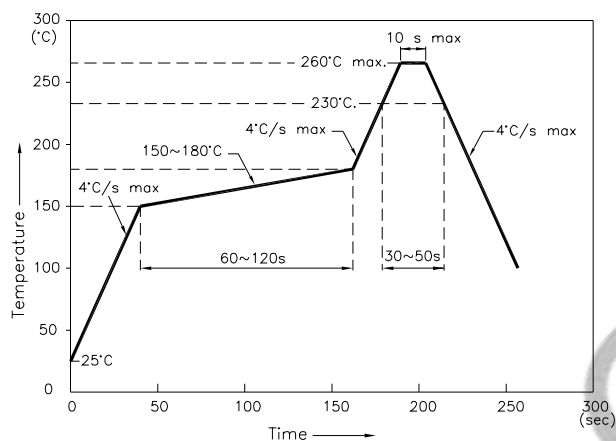
1. wavelength: ±1nm
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

◆ Typical Electrical/Optical Characteristics Curves



◆ Soldering Profile

Reflow Soldering Profile For Lead-free SMT Process.

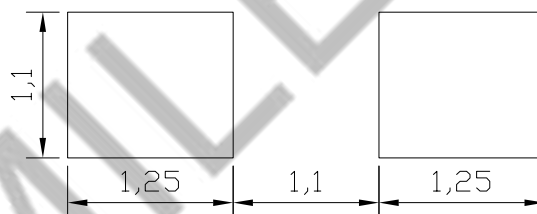


NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

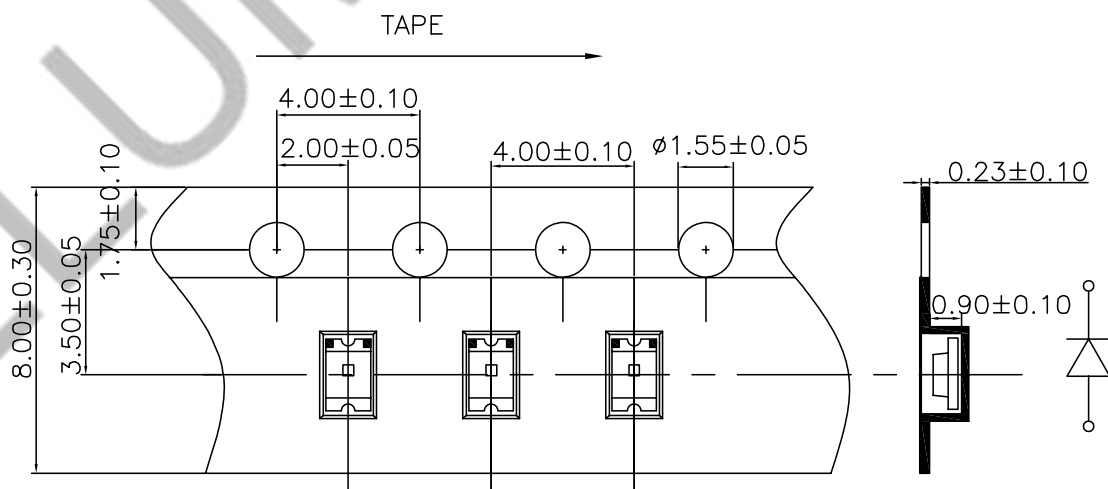
◆ Recommended soldering pattern

(Units:mm)



◆ Tape specifications

(Units:mm)



◆ VF Rank

Rank	VF(V)		Condition
	Min	Max	
G	2.8	3.0	IF=20mA
H	3.0	3.2	
J	3.2	3.4	
K	3.4	3.6	

Tolerance:±0.1V

◆ λD Rank

Rank	λD(nm)		Condition
	Min	Max	
4	464	467	IF=20mA
5	467	470	
6	470	473	

Tolerance:±1nm

◆ IV Rank

Rank	IV(mcd)		Condition
	Min	Max	
L	62	80	IF=20mA
M	80	100	
N	100	130	
P	130	170	

Tolerance:±15%

◆ CAUTIONS:

1.Storage

- In order to avoid the absorption of moisture, it is recommended to store in the dry box (or desiccator) with a desiccant. Otherwise, to store them in the following environment is recommended.
Temperature: 5°C~30°C Humidity: 60%HR max.
- Attention after opened
However LED is corresponded SMD, when LED be soldered dip, interfacial separation may affect The light transmission efficiency, causing the light intensity to drop. Attention in followed.
 - a. After opened and mounted, the soldering shall be quickly.
 - b. Keeping of a fraction
Temperature: 5°C~40°C Humidity: less than 30%
- In case or more than 1 week passed after opening or change color of indicator on desiccant components shall be dried 10-12hr. at 60°C±3°C.
- In case of supposed the components is humid, shall not be dried dip-solder just before.
100Hr at 80°C±3°C or 12Hr at 100°C±3°C

2.ESD (Electrostatic Discharge)

- Static Electricity or power surge will damage the LED.
The following procedures may decrease the possibility of ESD damage.
- All production machinery and test instruments must be electrically grounded.
 - Use a conductive wrist band or anti-electrostatic glove when handling these LEDs.
 - Maintain a humidity level of 50% or higher in production areas.
 - Use anti-static packaging for transport and storage.

◆ Revision History:

Rev. No.	Change description	Date	Prepared by	Checked by	Approved by
A/0	New-made specification	2007/8/1			
A/1	Revision rank	2008/1/21			
A/2	Revision intensity rank	2011/03/21			