

LENNOO 聯宇電子股份有限公司

LENNOO ELECTRONICS CO., LTD.

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APPROVAL SHEET

CUSTOMER: _____

CUSTOMER PART NO. _____

TYPE NO.: L053XGD

PACKAGE SIZE: 5.0mm Round Type LED Lamp

DICE MATERIAL: AlInGaP **PEAK WAVE LENGTH(nm)** 570

EMITTED COLOR: Green **VIEWING ANGLE (deg):** 45

LENS COLOR: Green Diffused **IV(mcd):** 70

**CUSTOMER
ENGINEERING DEPARTMENT**

**LENNOO ELECTRONICS CO., LTD.
ENGINEERING DEPARTMENT**

(Authorized Signature)

APPROVED DATE _____

ISSUED DATE _____

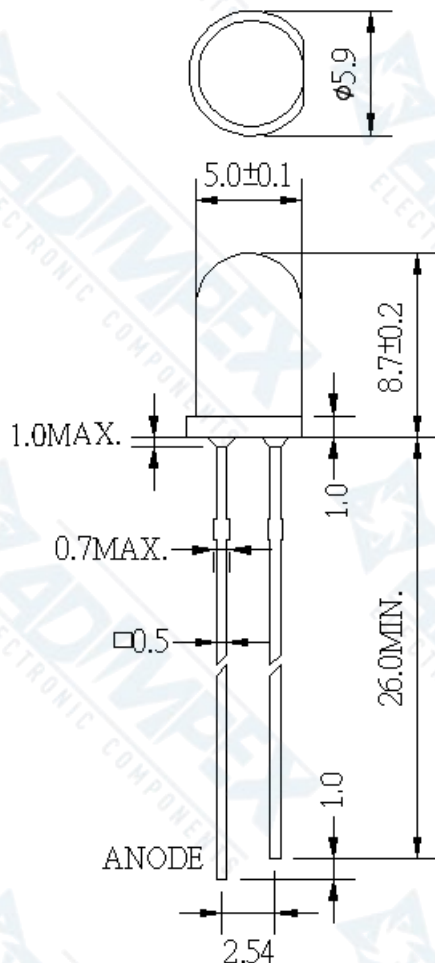
TYPE NO. : L053XGD
● ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	40	70	90	mcd	IF = 20mA
Viewing Angle	2θ1/2		45		deg	
Peak Emission Wavelength	λp		570		nm	
Dominant Wavelength	λD	567	570	573	nm	
Spectral Line Half-Width	Δλ		30		nm	
Forward Voltage	VF	1.8	2.1	2.4	V	VR=5V
Reverse Current	Ir	-	-	10	uA	

▲ Luminous intensity (IV) ±10%, Forward Voltage (VF) ±0.1V, Wavelength (λ d) ±0.5nm

● ABSOLUTE MAXIMUM RATINGS : (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	85	mW
Peak Forward Current (Duty 1/10 @ 1KHZ)	IF (Peak)	100	mA
Recommended Operating Current	IF (Rec)	30	mA
Electrostatic Discharge	ESD _{HBM}	2000	V
Operating Temperature Range	T _{OPR}	-40 ~ +85	°C
Storage Temperature Range	T _{STG}	-40 ~ +100	°C
Lead Soldering Temperature Range 【1.6 mm (1/16 inch) from body】	Reflow Soldering : 260 °C for 5 sec. Hand Soldering : 350 °C for 3 sec.		

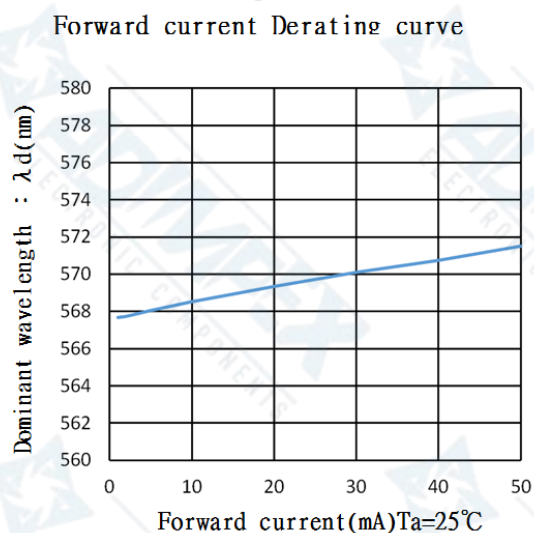
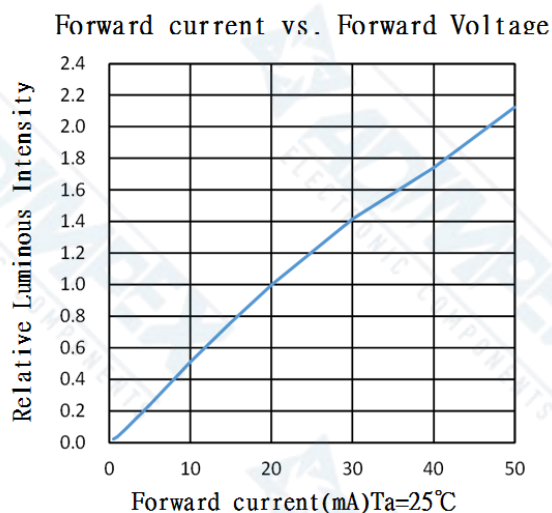
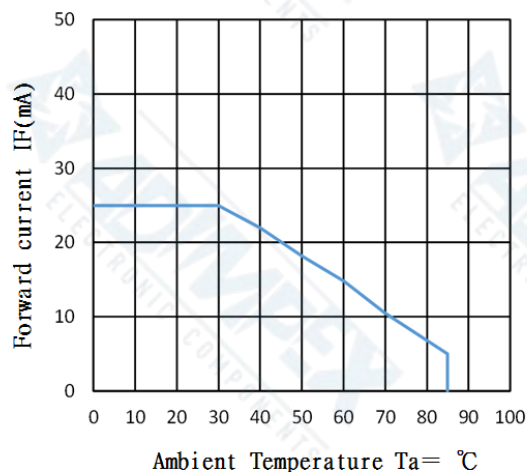
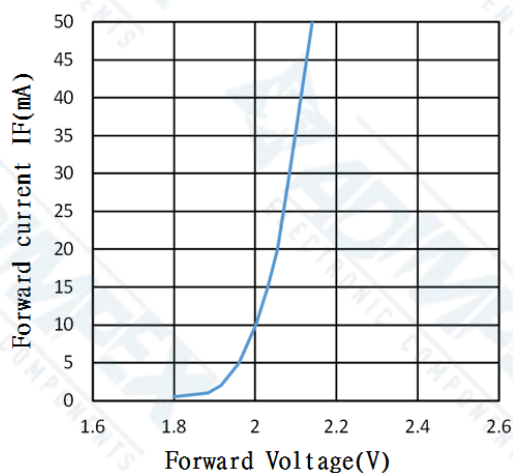
LENOO**LED LAMPS PACKAGE DIMENSIONS**

DEVICE NO.:L053XGD	DRAWING NO.	ENGINEER
ALL TOLERANCE SHALL BE ± 0.01 inch/ 0.25 mm UNLESS OTHERWISE NOTED	DRAWING DATE	APPROVER

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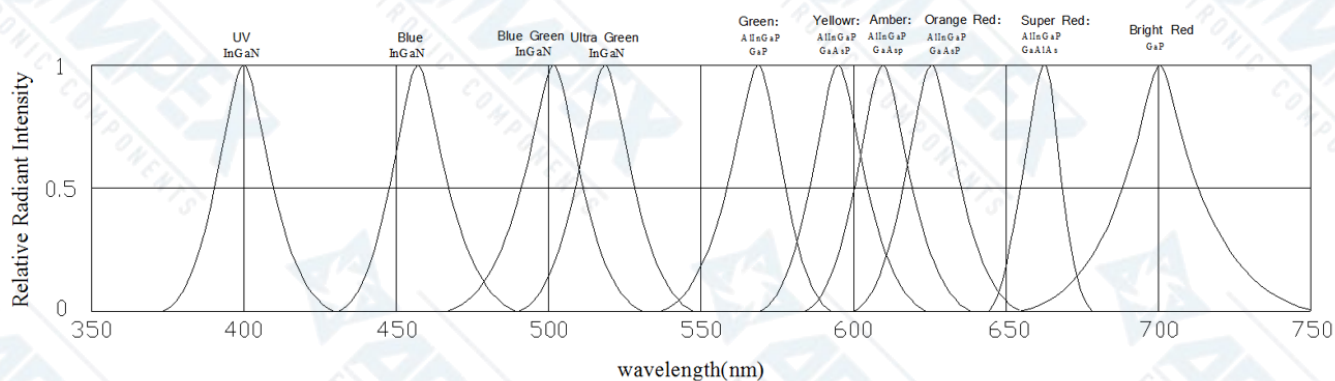
Typical Electro-Optical Characteristics Curves

Green (AlInGaP $\lambda_P = 570$ nm)



Luminous Intensity vs. Forward current

Dominant Wavelength vs. Forward Current



Relative Intensity VS. wavelength

Precautions For Use LED

1. Drive Method

LED is current-operated device. In order to ensure intensity uniformity on multiple LEDs connected in parallel in a application, it is recommended that a current limiting resistor be incorporated in the drive circuit.



- Circuit A it is recommended circuit.
- Circuit B the brightness of each LED might appear different due to the differences in the I-V characteristics of those LEDs.

2. Over-current-proof

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

3. Storage

- The Storage Temperature and RH are: $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$, RH 60% or less.
Once the package is opened, the products should be used with in a week. Otherwise, they should be kept in moisture proof package with moisture absorbent material (silica gel).
- we suggest our customers to use our products within a year.
If the moisture absorbent material (silica gel) has faded away or the LEDs exceeded the storage time , baking treatment should be performed using the following conditions.
Baking treatment: more than 24 hours at $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

4. Electrostatic Discharge (ESD)

Static electricity or surge voltage will damage the LEDs

Suggestions to prevent ESD damage:

Use of a conductive wrist band or ante-electrostatic glove when handing these LEDs

All devices, equipment, and machinery must be properly grounded.

Work tables storage racks, etc. should be properly grounded

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

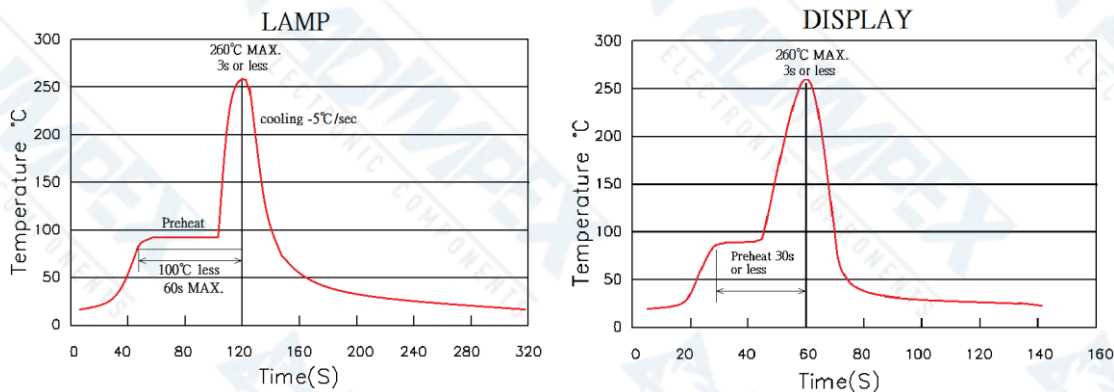
5. Others

- If want to have the uniform luminance and color, please use the same binning number, and avoid using intermix to cause the differences of luminance and color.
- The appearance and specifications of the product may be modified for improvement without prior notice.

6. Soldering

Recommended soldering condition as shown below:

● Soldering heat (DIP)



Soldering Iron

Temperature at tip of iron : 350°C Max.

Soldering Time: 3 sec. ± 1 sec. (one time only)

If temperature is higher, time should be shorter

● Reflow Temp./Time(SMD)

