

## 5mm Round LED Lamps

PART NO.: L-05Y2D231C11-01



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

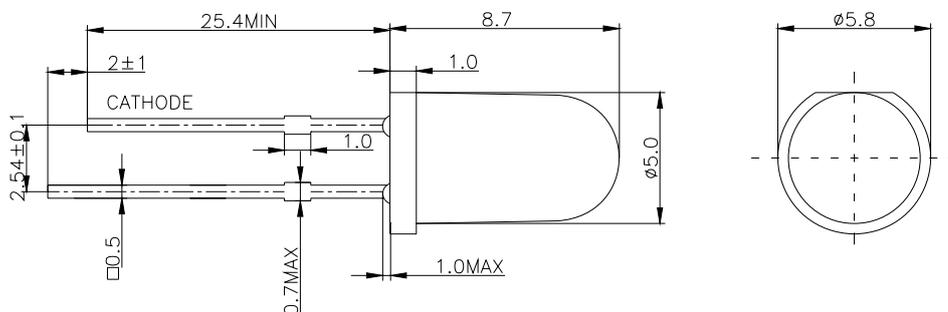
### Features

- Low power consumption
- Excellent product quality and reliability
- Lead-free device.

### Applications

- Electronic signs and signals
- Bright ambient lighting conditions
- Backlight.
- General purpose indicators

### ◆ Package Dimensions



### Notes:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$  unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

### ◆ Device Selection Guide

Part No.	Chip		Lens color
<b>L-05Y2D231C11-01</b>	Material	Emitted color	Water Clear
	AlGaInP	Yellow	

### ◆ Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	50	mW
Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current*1	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-40°C To +85°C	
Storage Temperature	T <sub>stg</sub>	-40°C To +85°C	
Soldering Temperature*2	T <sub>sol</sub>	260°C For 5 Seconds	

Notes:

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

\*2: 1.6mm below package base.

### ◆ Electrical / Optical Characteristics at TA=25°C

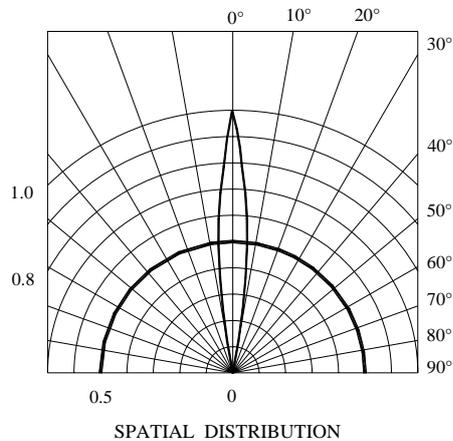
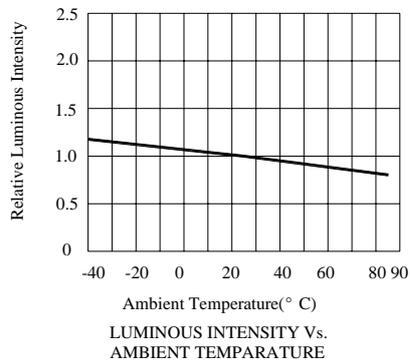
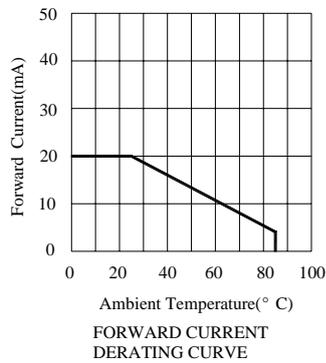
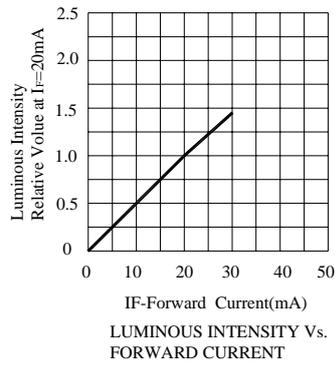
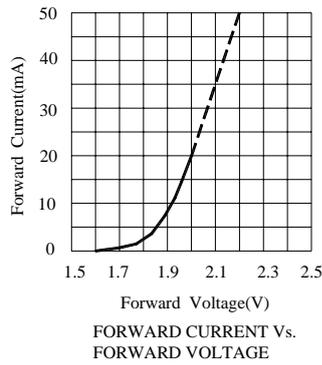
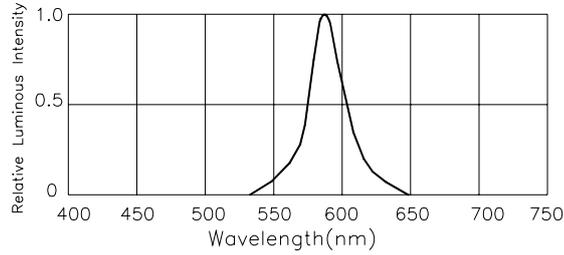
Parameter	Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	V <sub>F</sub>	1.80	2.0	2.60	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	—	—	10	μA	V <sub>R</sub> =5V
Dominant Wavelength	λ <sub>d</sub>	586	590	594	nm	I <sub>F</sub> =20mA
Peak Wavelength	λ <sub>P</sub>	—	595	—	nm	I <sub>F</sub> =20mA
Spectral line Half-width	Δλ	—	20	—	nm	I <sub>F</sub> =20mA
Luminous Intensity	I <sub>v</sub>	3000	—	8000	mcd	I <sub>F</sub> =20mA
Power Angle	2θ <sub>1/2</sub>	—	15	—	Deg.	I <sub>F</sub> =20mA

Remarks:

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

1. Dominant Wavelength: +/-1nm
2. Chromatic Coordinates: +/-0.01
3. Luminous Intensity: +/-15%
4. Forward Voltage: +/-0.1V
5. The design and working Current for Led is not less than 2mA.

◆ Typical Electrical/Optical Characteristics Curves  
 ( Ta=25°C Unless Otherwise Noted )



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◆ CAUTIONS:

**1. Lead Forming & Assembly**

- Any lead forming or bending must be done before soldering, at normal temperature.
- When forming leads, there must be a minimum of 3mm clearance between the base of the LED lens and the lead bend.
- Do not use the base of the lead frame as a fulcrum during lead forming.
- Avoid bending the leads at the same point more than once.
- During assembly onto PCB, the lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement.

**2. Cleaning:**

- Isopropyl alcohol or deionized water are recommended solvents for cleaning. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the resin or not.

**3. Storage**

- The storage ambient for the LEDs should not exceed 30°C temperature or 70% relative humidity.
- It is recommended that LEDs out of their original packaging are used within three months. For extended storage out of their original packaging, it is recommended that the LEDs be stored in a sealed container with appropriate desiccant or in desiccators with nitrogen ambient.

**4. 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.
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