



SPECIFICATION FOR LED LAMP

P/N : LR451D7N

Approved Sheet

Designed by	Qualified by	Approved by Customer

LR451D7N

Spec. No. : GT-0210-09-027

Features

- ◆ 5mm, Perpendicular Oval Package
- ◆ General purpose leads
- ◆ Viewing Angle : 30°/70°

Benefits

- ◆ High intensity
- ◆ Lower Power Consumption
- ◆ High Reliability and Firm and Solid
- ◆ Optimal Optical and Mechanical Design



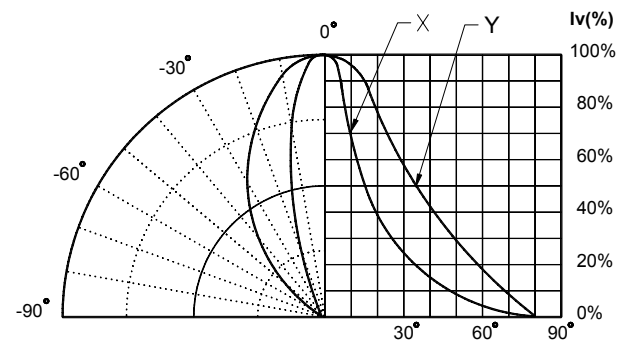
LED Picture

Applications

- ◆ For outer screen
- ◆ Electronic Signs and Signals
- ◆ Lighting
- ◆ General Purpose Indicators

Description

- ◆ The 5mm perpendicular oval lamps are tinged, diffused ., The precise optical design takes fine or special radiant pattern. This characteristic provides suitable viewing angle and helpful for special lighting function

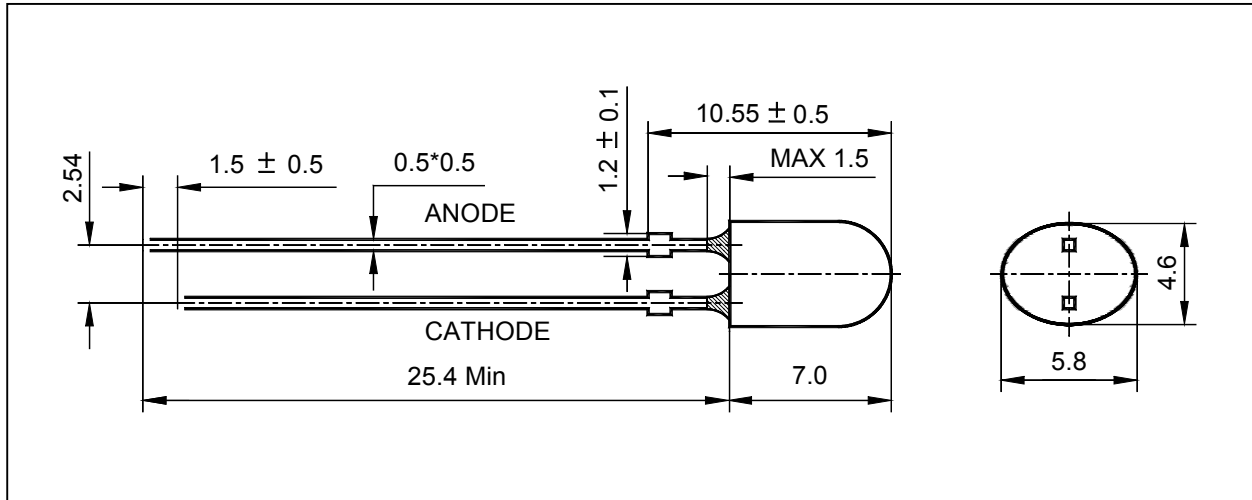


Beam Pattern

Device Selection Guide

Part Number	Viewing Angle	Resin Color	LED Color	Chip Material	Stand OFF
LR451D7N	30°/70°	Color Diffused	Red	AlGaInP/GaAs	Yes

Package Dimensions



- Notes:**
1. All dimensions are in millimeters
 2. Tolerance is $\pm 0.20\text{mm}$ unless otherwise noted.
 3. Protruded resin under flange is 1.5mm max.
 4. Lead spacing is measured where the leads emerge from the package.
 5. Specifications are subject to change without notice.

Absolute Maximum Rating at $T_a=25^\circ\text{C}$

Parameter	Value	Units
Power Dissipation	150	mW
Peak Forward Current(1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Forward Current	50	mA
Reverse Voltage	25	V
Operating Temperature Range	-40°C to $+80^\circ\text{C}$	
Storage Temperature Range	-55°C to $+100^\circ\text{C}$	
Lead Soldering Temperature(3mm From Body)	260 $^\circ\text{C}$ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Luminous Intensity	I_v	200	----	----	mcd	$I_f=20mA$
Viewing Angle	$2\theta_{1/2}$	----	30/70	----	Deg.	$I_f=20mA$
Dominant Wavelength	λ_d	----	624	----	nm	$I_f=20mA$
Forward Voltage	V_f	----	2.0	2.4	V	$I_f=20mA$
Reverse Current	I_r	----	----	100	μA	$V_r=10V$

Note: 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity, $2\theta_{1/2} = \theta_{1/2} + \theta_{1/2}$.

Bin Ranks

Rank	C	D	E
Luminous Intensity ($I_f = 20mA$)	200~260 mcd	260~340 mcd	340~450 mcd
Rank	F	G	H
Luminous Intensity ($I_f = 20mA$)	450~580 mcd	580~750 mcd	750~980 mcd

Note: The quantity ratio of the ranks is decided by GVOPTO.

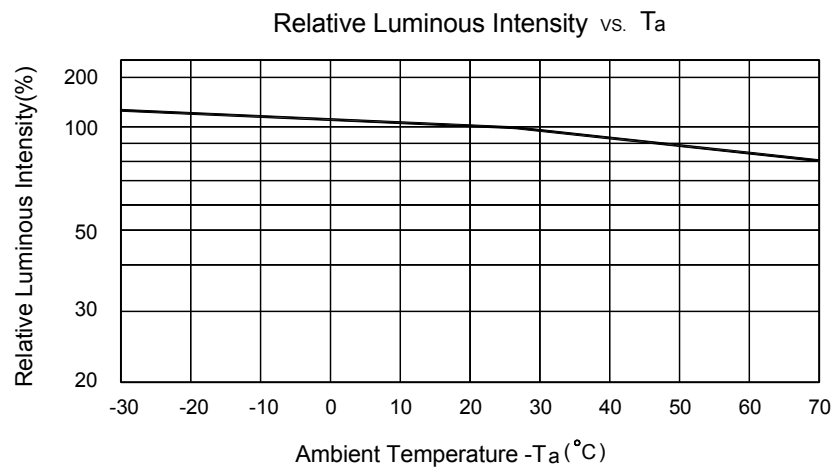
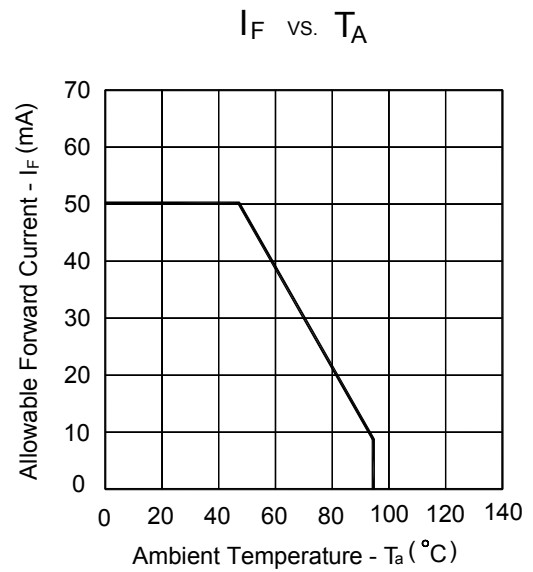
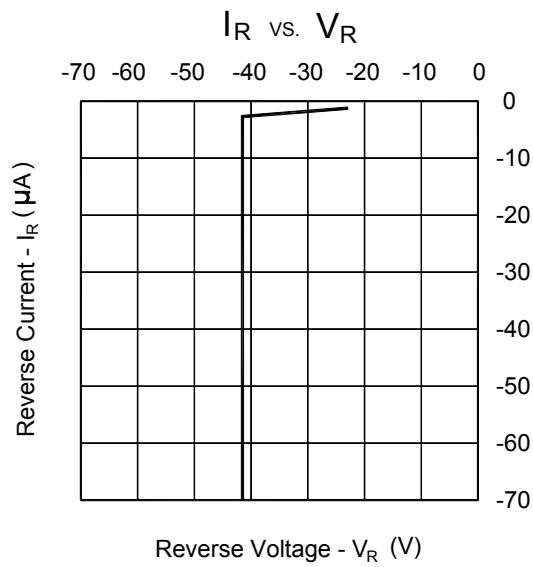
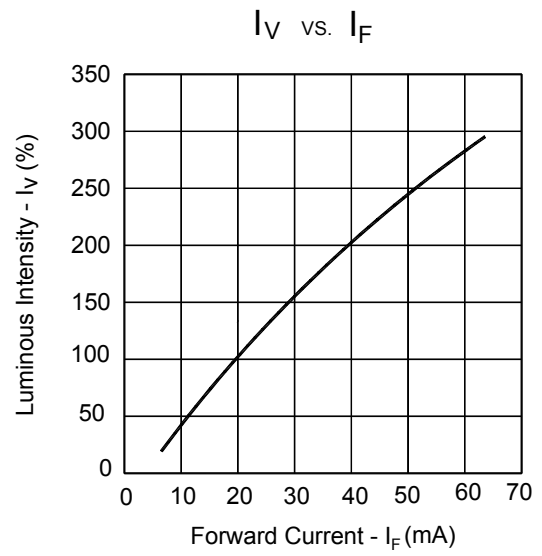
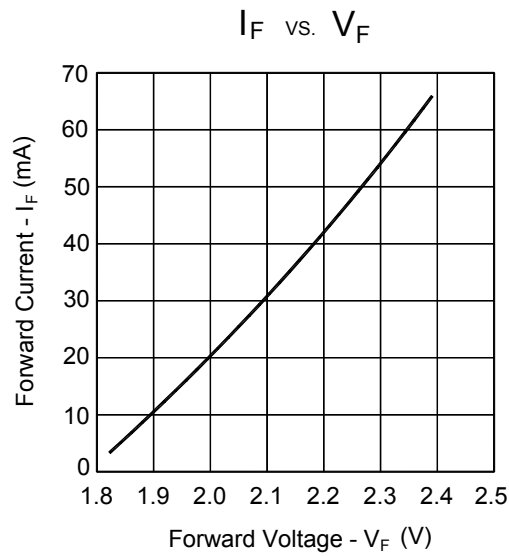
Measurement Uncertainty of the Luminous intensity : $\pm 15\%$

Measurement Uncertainty of the Forward Voltage : $\pm 0.1V$

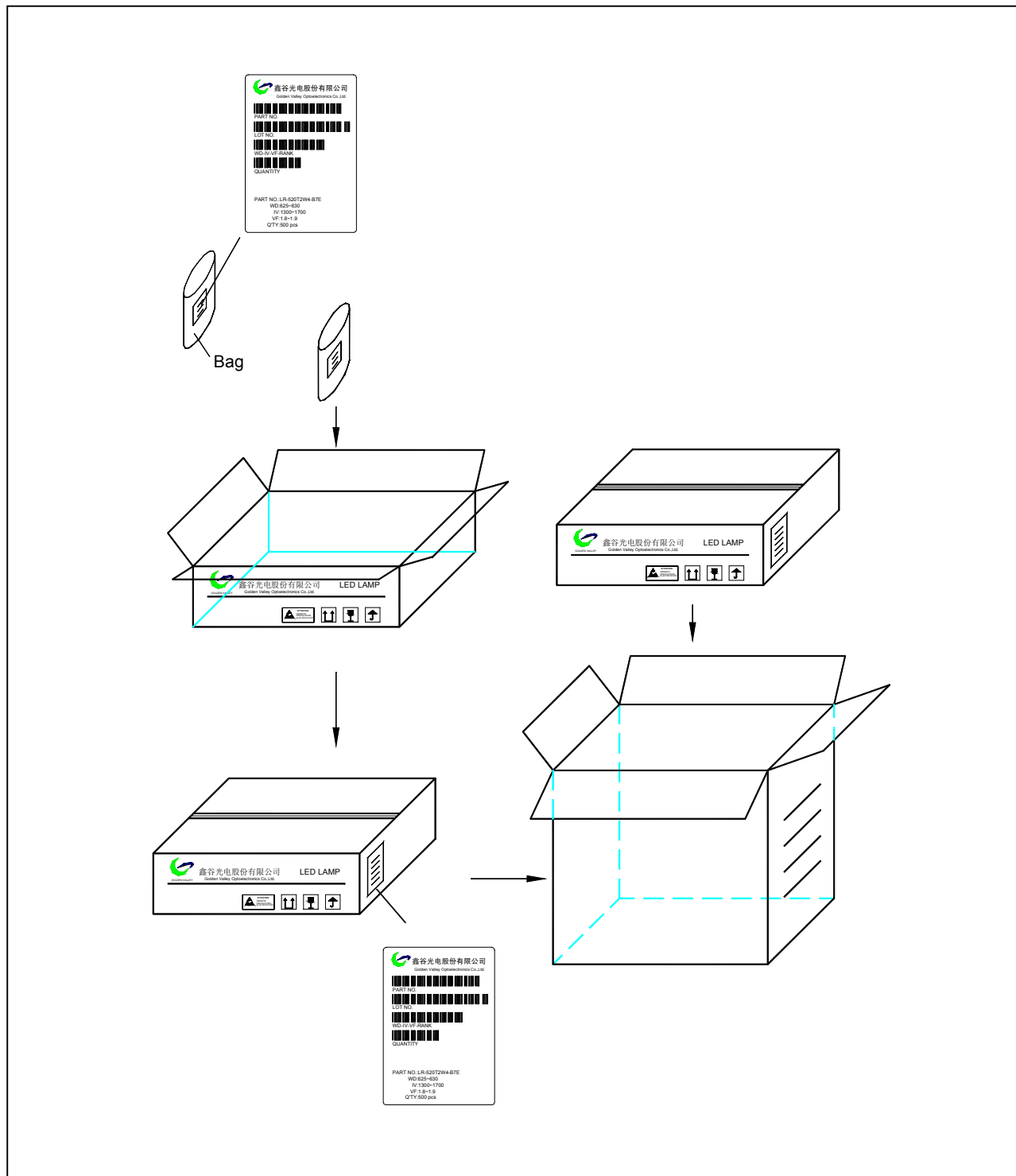
Cautions on LED Usage

1. Static electricity and surge will damage the LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
2. Use grounded soldering iron and do not solder the LEDs at the conditions beyond the absolute maximum ratings specified in the data sheet.
3. G.V. will not be held responsible for any damage caused by the operation exceeds the absolute maximum ratings.
4. Use the LEDs as soon as possible once the bag was opened. Store and use where there is no corrosive gas. The leads of LEDs will be rusty when the LEDs were exposed to the air for longer than one month.

Typical Electrical / Optical Characteristics Curves
(25°C Ambient Temperature Unless Otherwise Noted)



Packing Specification



Notes :

1. Inner play bag is common products
2. 20 bags per inner box, 20 kpcs per inner box .
3. 3 inner box per outer box, 60 kpcs per outer box