鑫谷光电股份有限公司

GOLDEN VALLEY OPTOELECTRONICS CO., LTD.

SPECIFICATION FOR LED LAMP

P/N : LR431DKN

Approved Sheet

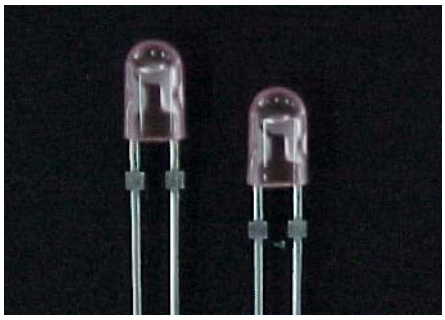
Designed by	Qualified by	Approved by Customer

LR431DKN

Spec. No. : GT-0210-09-022

Features

- 4mm, Parallel Oval Shape
- Standard Lead Pitch
- Viewing Angle : 100°/45°



LED Picture

Benefits

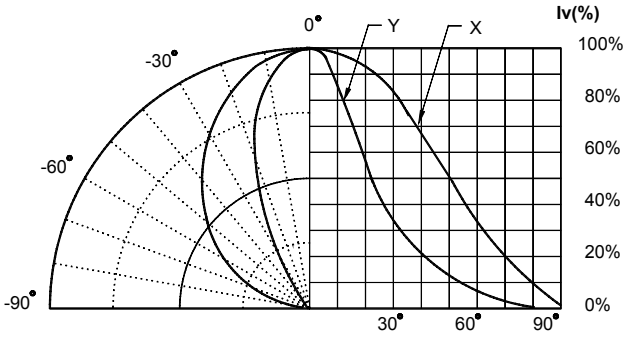
- High intensity
- Lower Power Consumption
- High Reliability and Firm and Solid
- Optimal Optical and Mechanical Design

Applications

- For Outer Screen
- Electronic Signs and Signals
- Lighting
- General Purpose Indicators

Description

- The 4mm parallel 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..

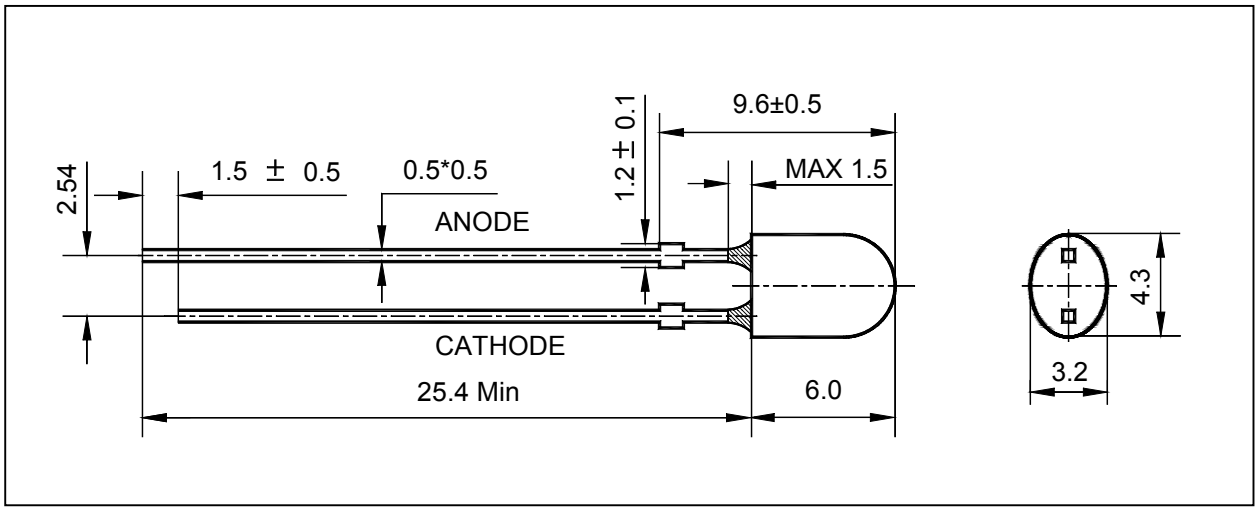


Beam Pattern

Device Selection Guide

Part Number	Viewing Angle	Resin Color	LED Color	Chip Material	Stand OFF
LR431DKN	100°/45°	Color Diffused	Red	AlGaInP/GaAs	Yes

Package Dimensions



Notes: 1. All dimensions are in millimeters

2. Tolerance is ±0.20mm 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 Ta=25℃

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℃ to + 80℃	
Storage Temperature Range	-55℃ to + 100℃	
Lead Soldering Temperature(3mm From Body)	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Luminous Intensity	Iv	160	----	----	mcd	I_f=20mA
Viewing Angle	2θ1/2	----	100/45	----	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	B	C	D
Luminous Intensity (I_f = 20mA)	160~200mcd	200~260mcd	260~340mcd
Rank	**E**	**F**	**G**
Luminous Intensity (I_f = 20mA)	340~450mcd	450~580mcd	580~750mcd

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

Measurement Uncertainty of the Luminous intensity : ±15%

Measurement Uncertainty of the Forward Voltage : ±0.1V

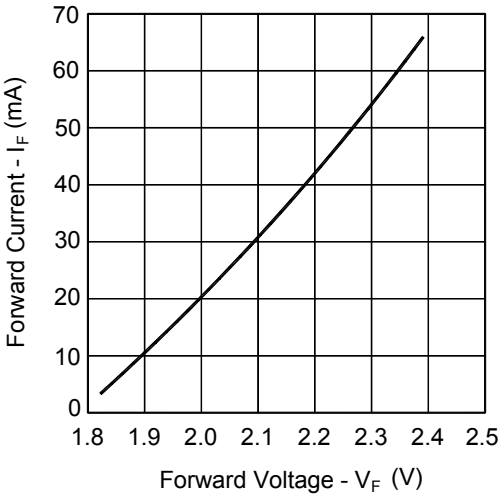
Cautions on LED Usage

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.
5. GV will provide APQP to customer by Grade Five if customer don't have special requirement.

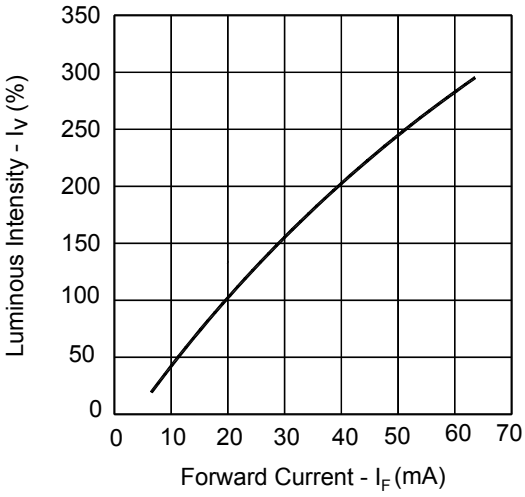
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

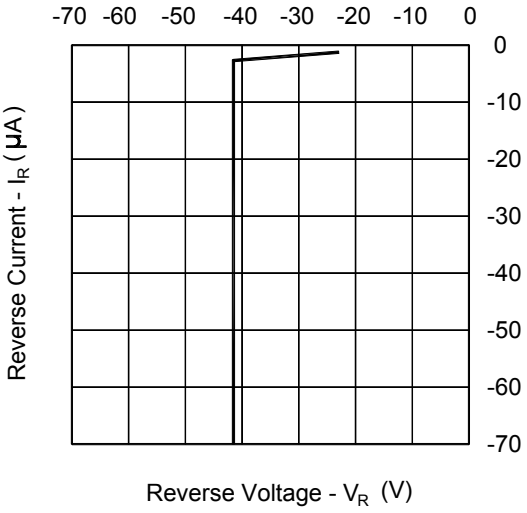
I_F vs. V_F



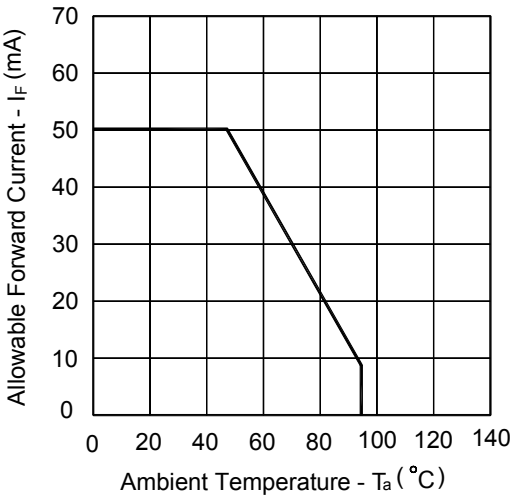
I_V vs. I_F



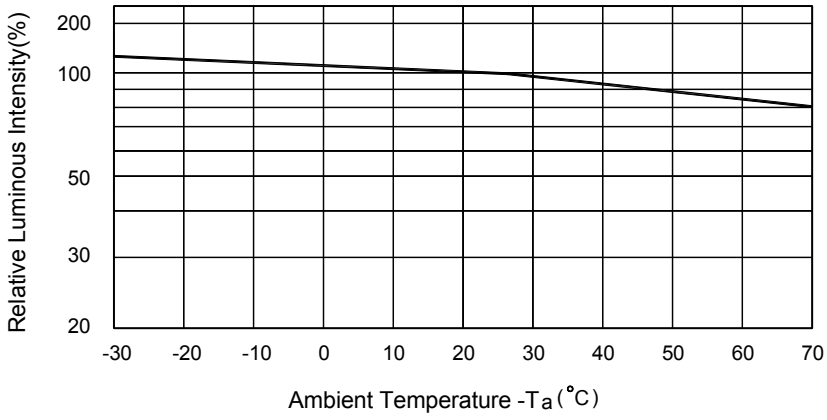
I_R vs. V_R



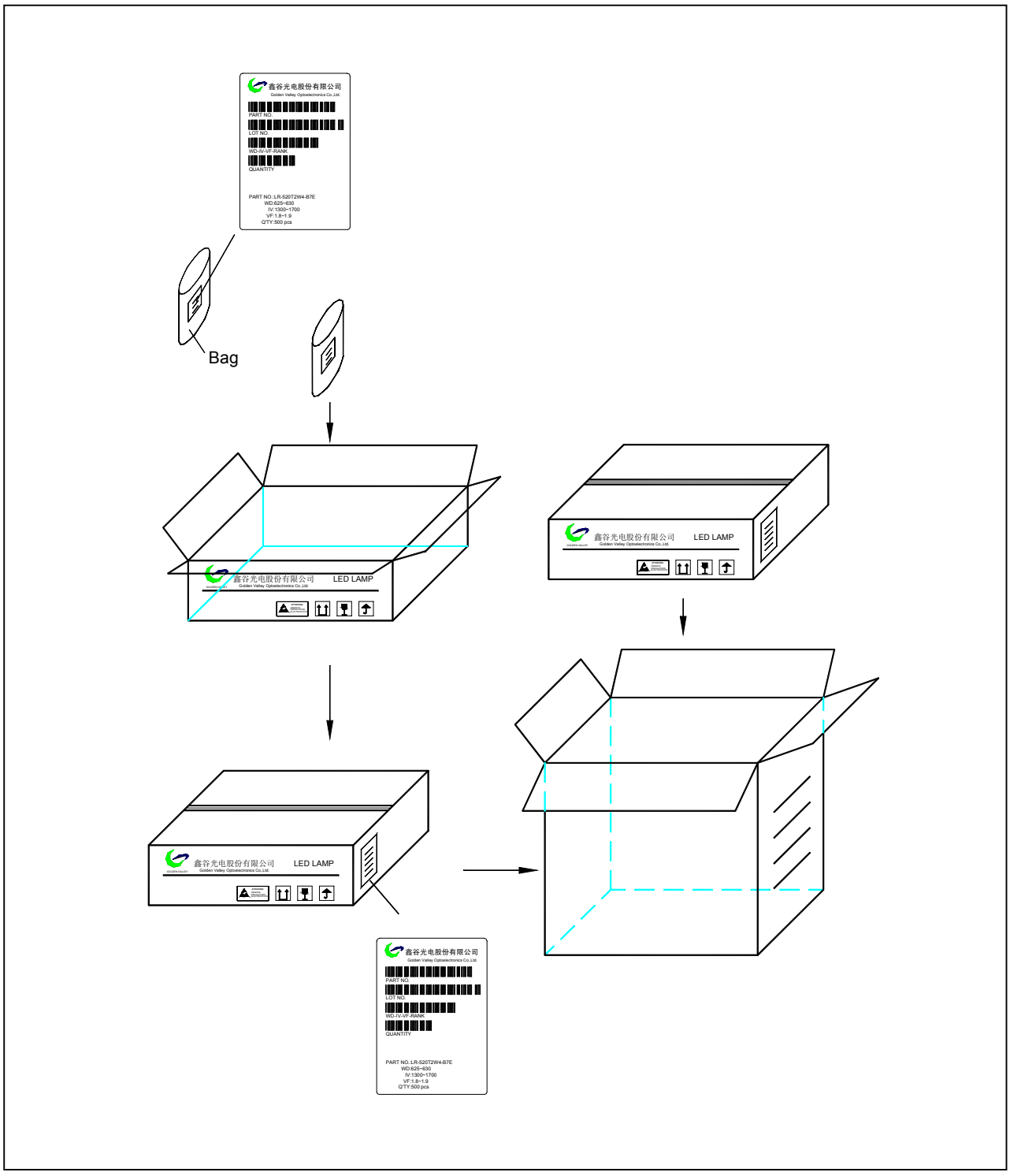
I_F vs. T_A



Relative Luminous Intensity vs. Ta



Packing Specification



Notes :

1. Inner ploy 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