



SPECIFICATION FOR LED LAMP

PART NO. : LT7N31E-81

2.4X5.0mm RECTANGULAR LAMP

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2.4X5.0mm RECTANGULAR LAMP
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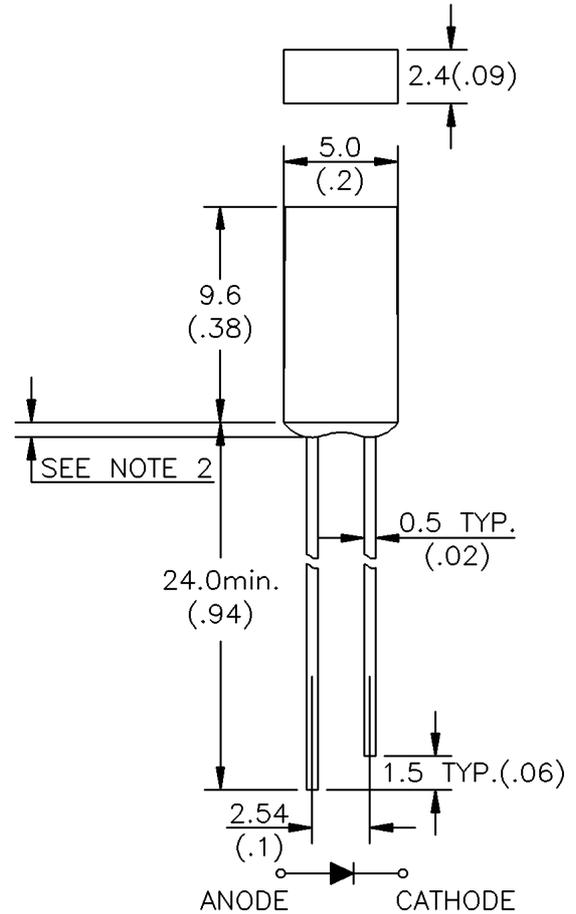
Features

- * High intensity
- * Reliable and rugged
- * Low current requirement
- * IC compatible

Description

The yellow lamps are made with GaAsP chips and yellow diffused epoxy resin.

Package Dimensions



Notes :

1. All dimensions are in millimeters (inches).
2. Protruded resin under flange is 1.0mm (.04") max.
3. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.

Part No.	Led Chip		Lens Color
	Material	Emitting Color	
LT7N31E-81	GaAsP	Yellow	Yellow Diffused



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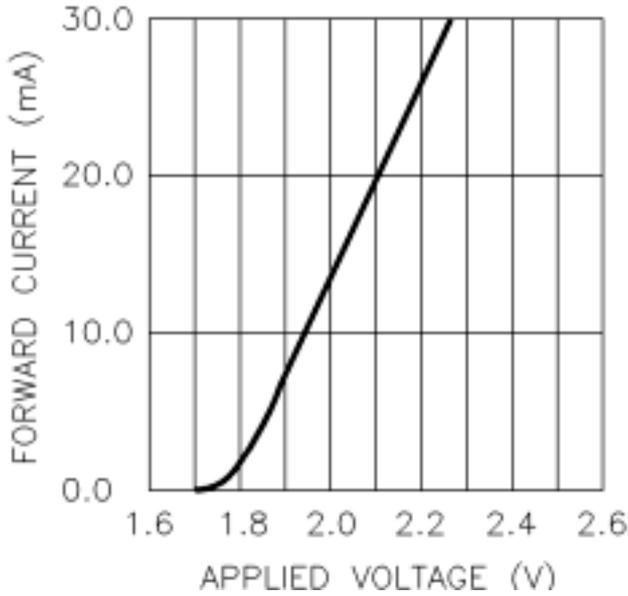
Absolute Maximum Ratings at Ta=25°C :

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	72	mW
Reverse Voltage	Vr	5	V
D.C. Forward Current	If	30	mA
Peak Current (1/10 Duty Cycle,0.1ms pulse width)	If (Peak)	100	mA
Operating Temperature Range	Topr	-25 to +85	°C
Storage Temperature Range	Tstg	-40 to +100	°C
Lead Soldering Temp. (1.6mm from body) for 5 seconds		260	°C

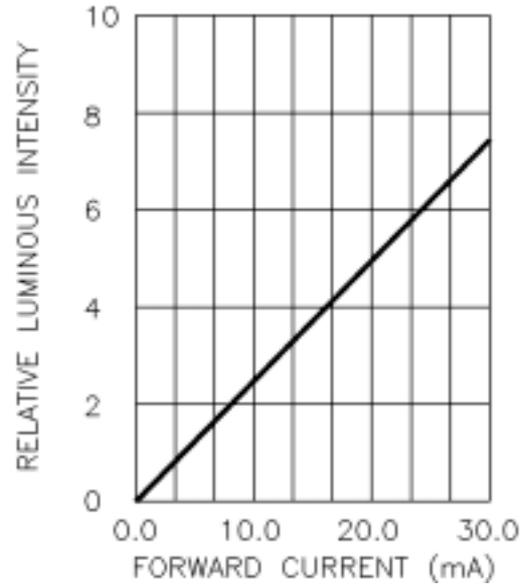
Electrical and Optical Characteristics :

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	3	5		mcd
Forward Voltage	Vf	If=20mA		2.1	2.4	V
Peak Wavelength	λp	If=20mA		589		nm
Dominant Wavelength	λd	If=20mA		590		nm
Reverse Current	Ir	Vr=5V			100	μA
Viewing Angle	$2\theta 1/2$	If=20mA		80		deg
Spectrum Line Halfwidth	$\Delta \lambda$	If=20mA		35		nm

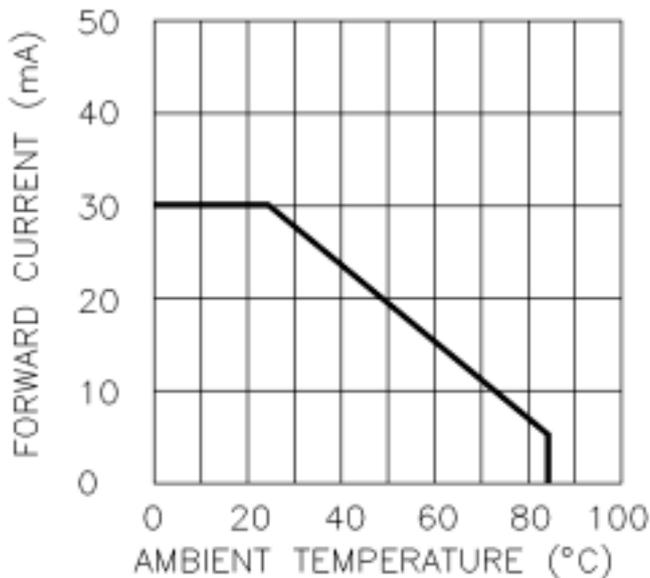
Typical Electrical / Optical Characteristics Curves :



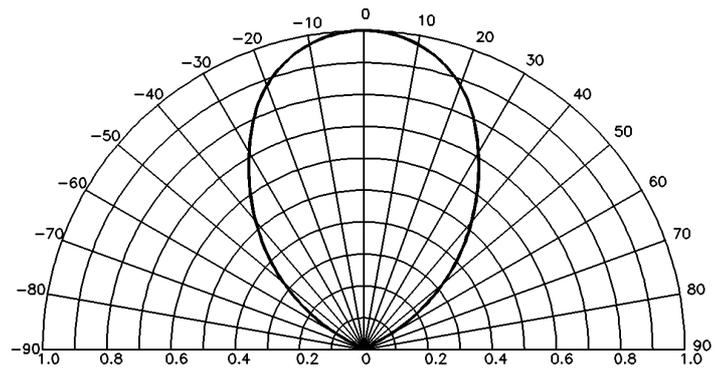
Forward Current vs. Forward Voltage



Forward Current vs. Relative Luminous Intensity



Ambient Temperature vs. Forward Current



Radiation Diagram

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Reliability Test Method :

Test Item	Test Condition	Duration Time
Operation Life	If=20mA / Ta=25°C	168 hrs
Storage at High Temperature	Ta=100°C	168 hrs
Storage at Low Temperature	Ta=-40°C	168 hrs
Storage at High Temperature/High Humidity	Ta=85°C / RH=85%	168 hrs
Operating at High Temperature	Ta=85°C / If=20mA	168 hrs
Operating at Low Temperature	Ta=-25°C / If=20mA	168 hrs
Thermal Shock	Ta/T=100°C/30min~ - 40°C/30min	10 cycles
Solderability	Tsol=260°C	5 sec

Criteria for Judging The Damage :

Item	Symbol	Test Condition	Criteria for Judgment	
			Min.	Max.
Forward Voltage	Vf	If=20mA	---	Initial Data x1.1
Reverse Current	Ir	Vr=5V	---	100 μ A
Luminous Intensity	Iv	If=20mA	Initial Data x0.8	---