



SPECIFICATION FOR LED LAMP

PART NO. : LT9531-81-LC

4.7mm CYLINDRIC LAMP

Approved by: *Daniel Chen* Prepared by: *Tammy*

LEDTECH ELECTRONICS CORPORATION

5TH FL,NO.542-5,CHUNG CHENG ROAD,
HSIN-TIEN CITY,TAIWAN.

TEL : 886-2-22186891

FAX : 886-2-22181222,22182894

4.7mm CYLINDRIC LAMP
PART NO. : LT9531-81-LC

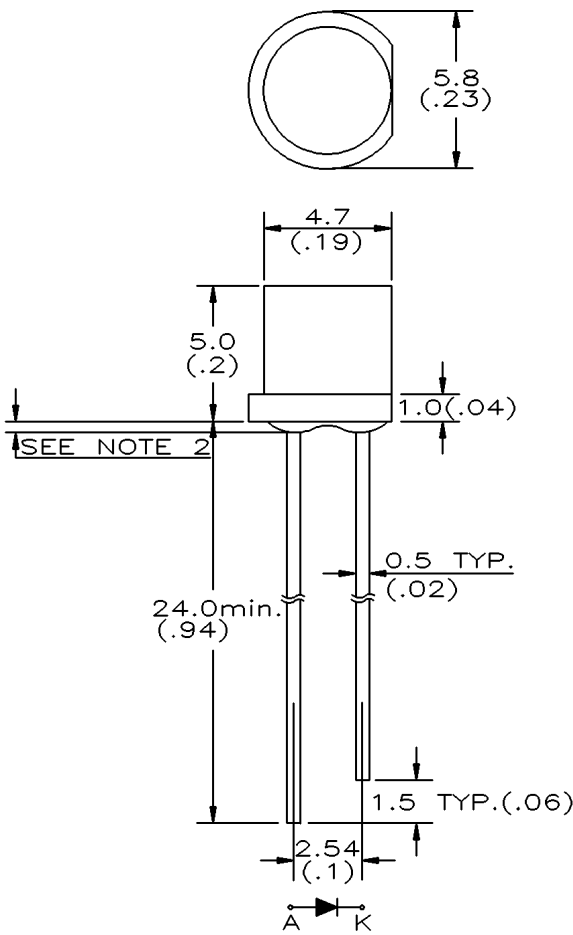
Features

- * 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 $\pm 0.25\text{mm}$ (0.10")unless otherwise noted.

Part No.	Led Chip		Lens Color
	Material	Emitting Color	
LT9531-81-LC	GaAsP	Yellow	Yellow Diffused

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Absolute Maximum Ratings at Ta=25°C :

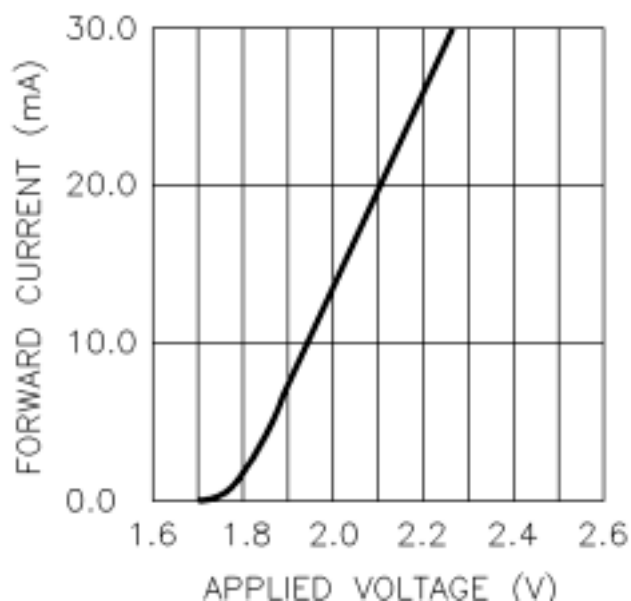
Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	72	mW
Reverse Voltage	Vr	5	V
D.C. Forward Current	If	30	mA
Peak Current (1/10 Duty Cycle,0.1ms pulse width)	If (Peak)	100	mA
Operating Temperature Range	Topr	-25 to +85	°C
Storage Temperature Range	Tstg	-40 to +100	°C
Lead Soldering Temp. (1.6mm from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

Electrical and Optical Characteristics :

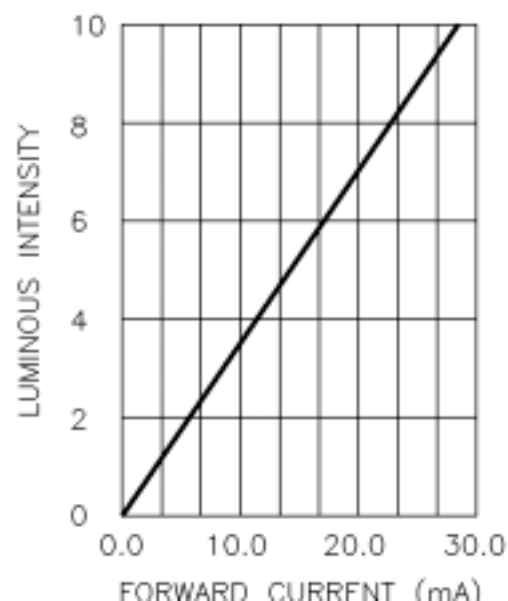
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=2mA	0.4	0.7		mcd
Forward Voltage	Vf	If=2mA		1.8	2.2	V
Peak Wavelength	λ_p	If=20mA		589		nm
Dominant Wavelength	λ_d	If=20mA		590		nm
Reverse Current	Ir	Vr=5V			100	μA
Viewing Angle	$2\theta_{1/2}$	If=20mA		85		deg
Spectrum Line Halfwidth	$\Delta\lambda$	If=20mA		35		nm

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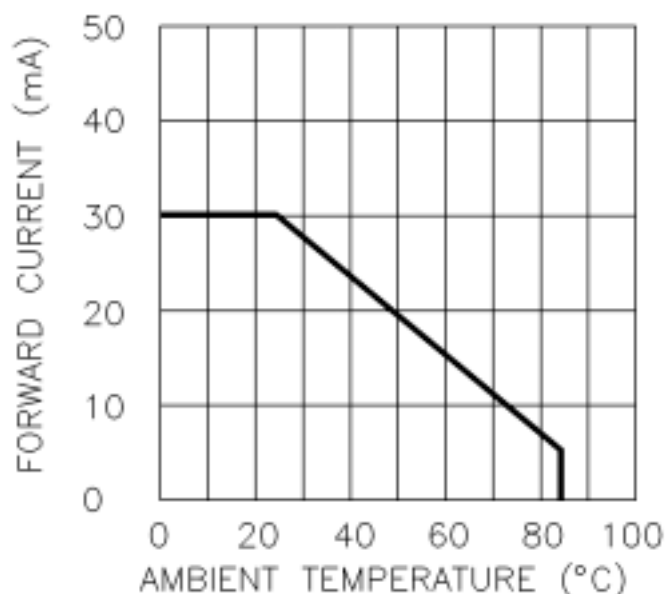
Typical Electrical / Optical Characteristics Curves :



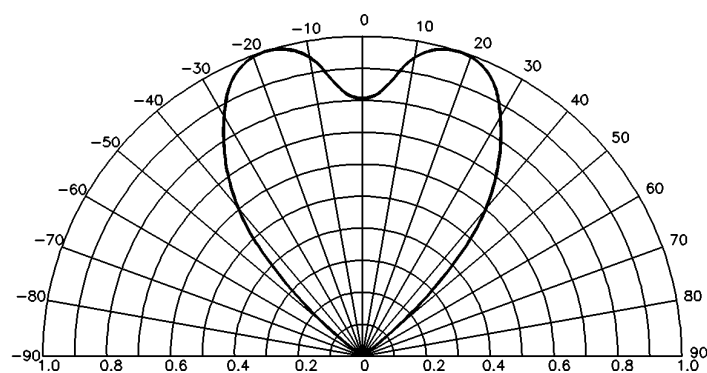
Forward Current vs. Forward Voltage



Forward Current vs. 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	— — —