

Part No. **AL-314OR1C-A**

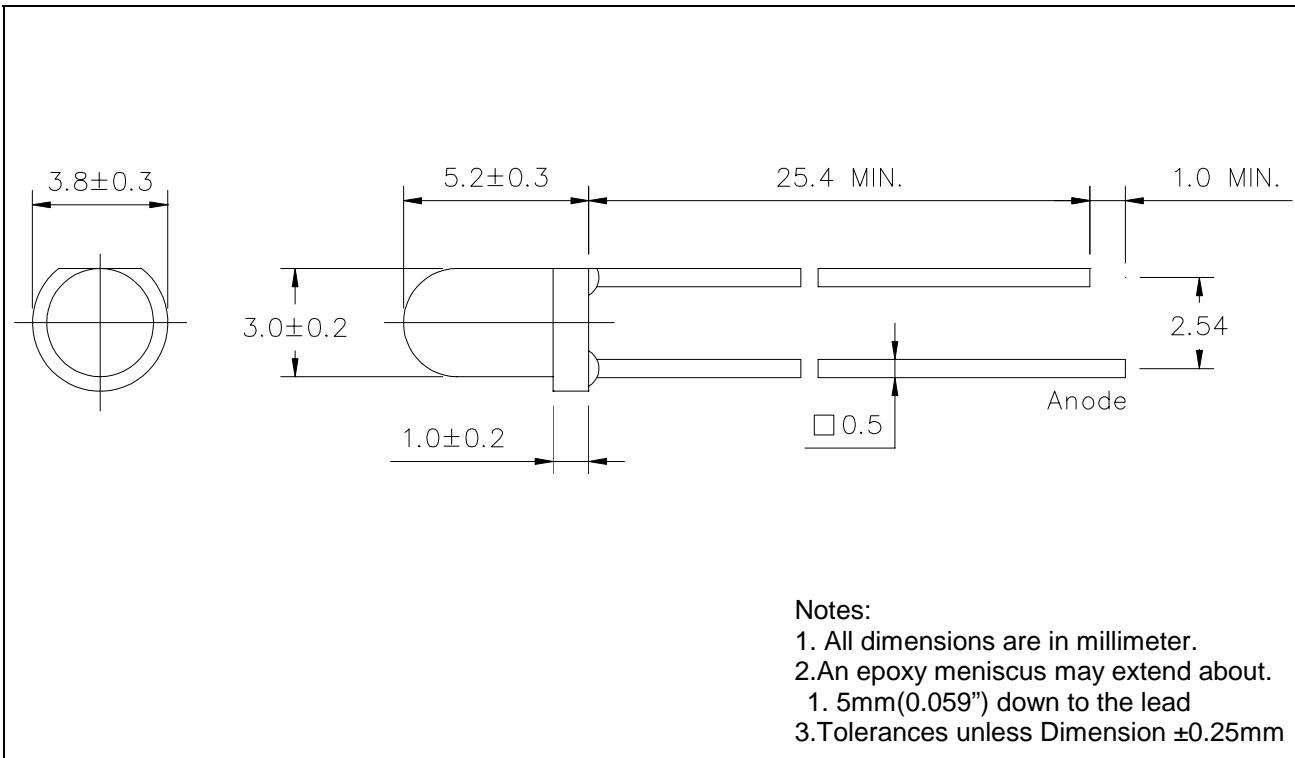
Diff No.

3 mm

Round

Type : LED Lamps

## Package Dimension :



## ■ Features :

- Choice of various viewing angles.
- Available on Tape and Reel.
- Reliable and robust.

## ■ Descriptions :

- The series is specially designed for application requiring higher brightness.
- The LED lamps are available with different color, intensities, epoxy colors etc.

## ■ Applications :

- TV set
- Monitor
- Telephone

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PART NO.	Chip		Lens Color
	Material	Emitted Color	
AL-314OR1C-A	AlGaInP	Ultra Bright Red	Water Clear

■ Absolute Maximum Ratings at Ta=25

Parameter	Symbol	Rating	Unit
Continuous Forward Current	$I_F$	50	mA
Operating Temperature	$T_{opr}$	-40 to +85	
Storage Temperature	$T_{stg}$	-40 to +85	
Soldering Temperature	$T_{sol}$	260 ±5	
Electrostatic Discharge	ESD	1000	V
Power Dissipation	$P_D$	120	mW
Peak Forward Current (Duty 1/10@1KHz)	$I_F$ (Peak)	100	mA
Reverse Voltage	$V_R$	5	V

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	$I_V$	1000	2000	/	mcd	$I_F=20mA$
Viewing Angle	$2\theta_{1/2}$	/	30	/	deg	$I_F=20mA$
Peak Wavelength	$\lambda_p$	/	630	/	nm	$I_F=20mA$
Dominant Wavelength	$\lambda_d$	/	625	/	nm	$I_F=20mA$
Spectrum Radiation Bandwidth		/	20	/	nm	$I_F=20mA$
Forward Voltage	$V_F$	/	2.0	2.6	V	$I_F=20mA$
Reverse Current	$I_R$	/	/	10	μA	$V_R=5V$

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## ■ Reliability test items and conditions :

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260 ± 5	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85 30min └ 5min L : -55 30min	50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100 5min └ 10set L : -10 5min	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55	1000 HRS	76 PCS	0/1
6	DC Operating Life	TEMP : 25 I <sub>F</sub> =20mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85 / 85%RH	1000 HRS	76 PCS	0/1

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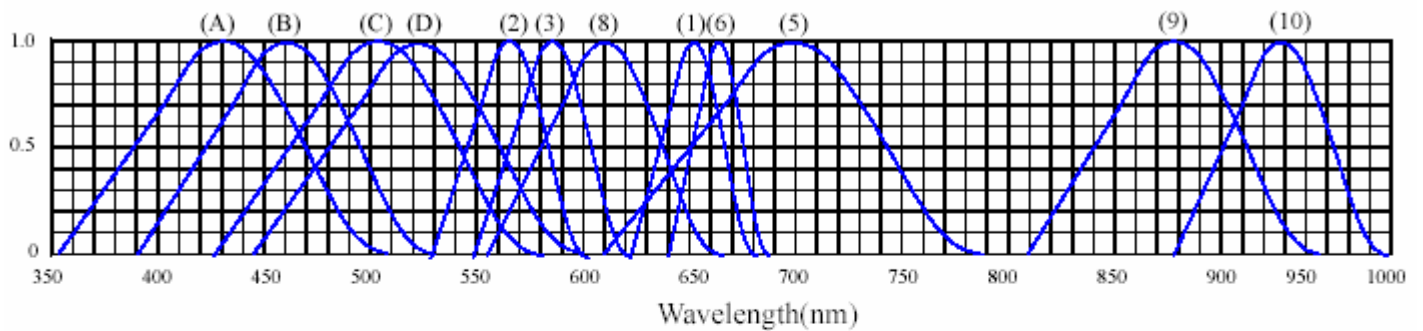
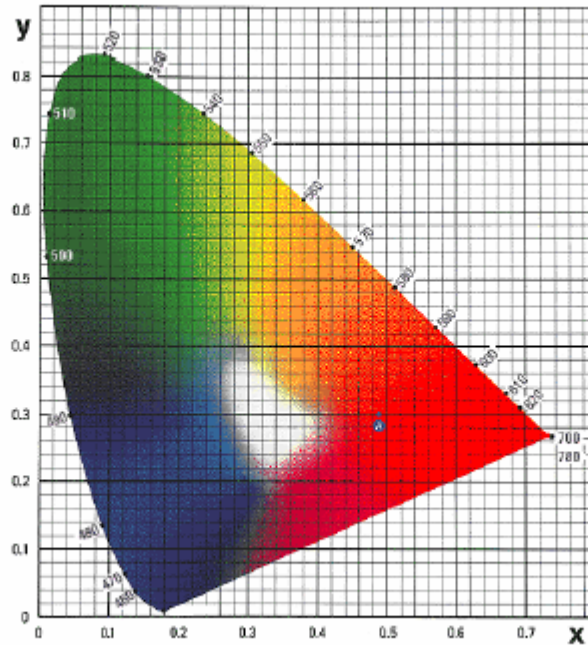
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## ◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES

RELATIVE INTENSITY VS. WAVELENGTH( $\lambda_p$ )

- |   |                                  |
|---|----------------------------------|
| (1) GaAsP/GaAs 655nm/Red                | (9)- GaAlAs 880nm                |
| (2) GaP 568nm/ Yellow Green             | (10)-GaAs/GaAs&GaAlAs/GaAs 940nm |
| (3) GaAsP/GaP 585nm/Yellow              | (A)- GaN 430nm/Blue              |
| (4) GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B)- InGaN 470nm/Blue            |
| (5) GaP 700nm/Bright Red                | (C)- InGaN 502nm/Ultra Green     |
| (6) GaAlAs/GaAs 660nm/Super Red         | (D)- InGaN 523nm/Ultra Green     |
| (8) GaAsP/GaP 610nm/Super Red           |                                  |

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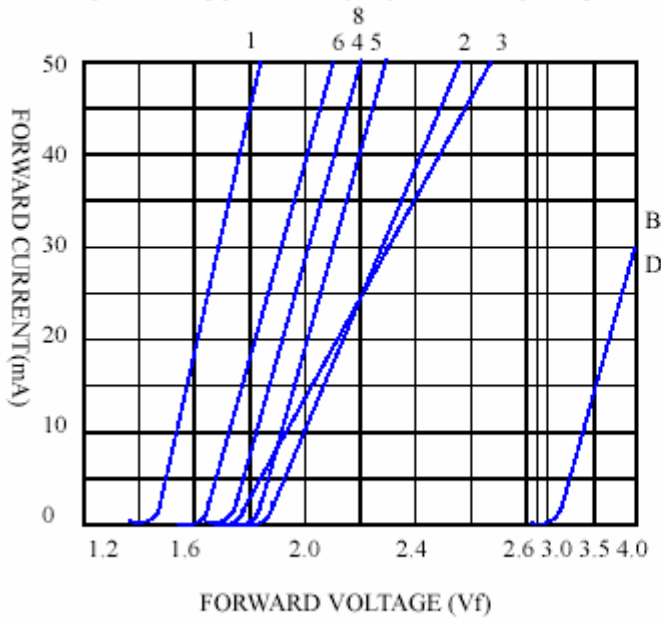
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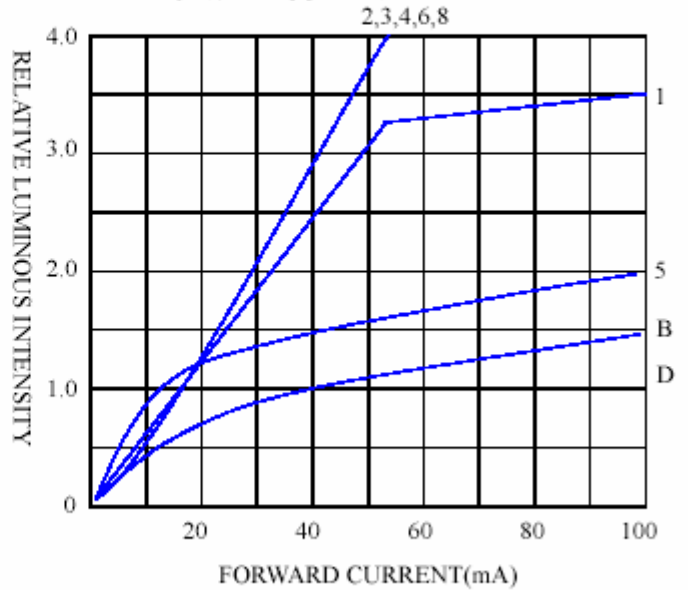
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◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

