

Part No.

**AL-513SRC-004**

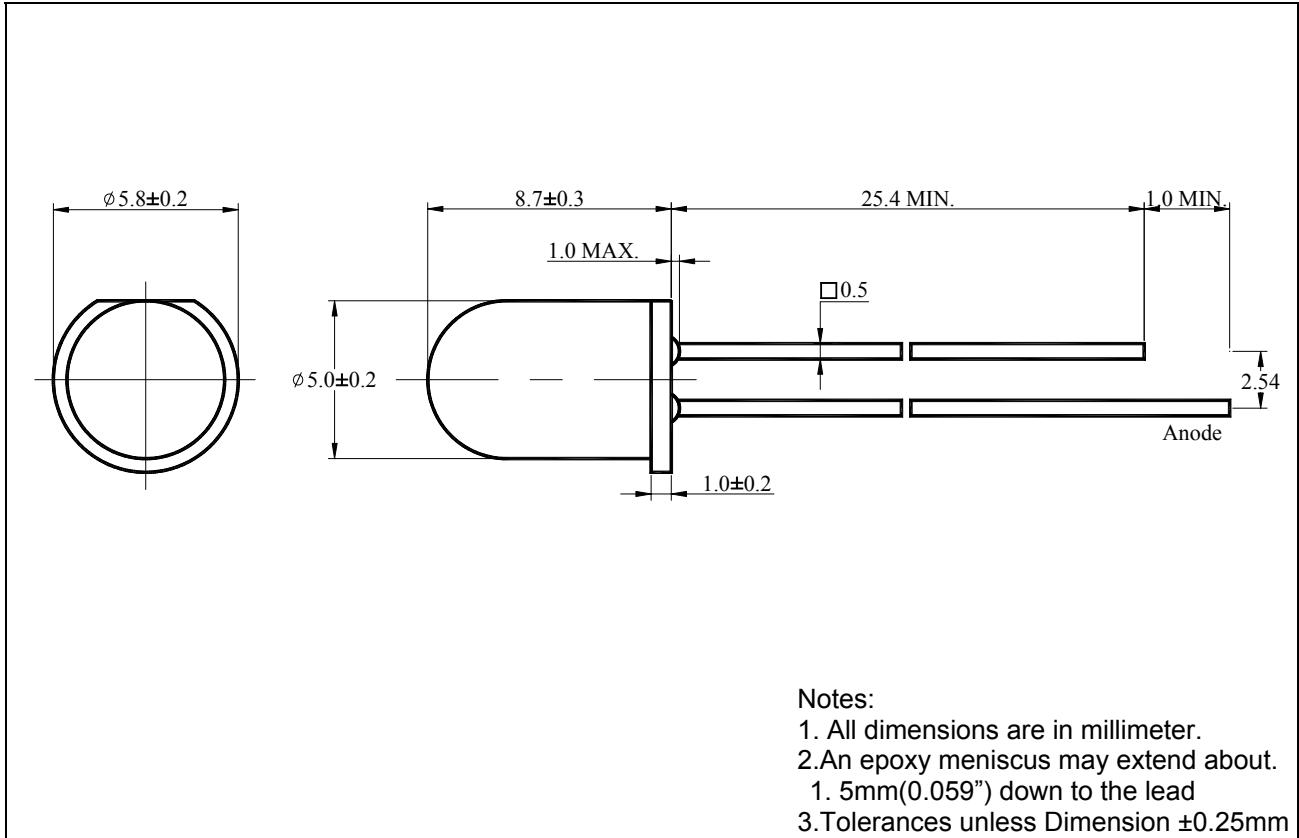
Diff No. 004

5 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-513SRC-004	AlGaAs	Red	Water Clear

■ Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Continuous Forward Current	I <sub>F</sub>	30	mA
Operating Temperature	T <sub>opr</sub>	-25 to +80	°C
Storage Temperature	T <sub>stg</sub>	-40 to +100	°C
Soldering Temperature	T <sub>sol</sub>	260 ± 5	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	P <sub>D</sub>	100	mW
Peak Forward Current (Duty 1/10@1KHz)	I <sub>F</sub> (Peak)	100	mA
Reverse Voltage	V <sub>R</sub>	5	V

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I <sub>v</sub>	400	500	/	mcd	I <sub>F</sub> =20mA
Viewing Angle	2θ <sub>1/2</sub>	/	15	/	deg	I <sub>F</sub> =20mA
Peak Wavelength	λ <sub>p</sub>	/	/	/	nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>	/	660	/	nm	I <sub>F</sub> =20mA
Spectrum Radiation Bandwidth	Δλ	/	20	/	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	/	1.7	2.2	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	/	/	50	μA	V <sub>R</sub> =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°C ± 5°C	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85°C 30min ∫ 5min L : -55°C 30min	50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10set L : -10°C 5min	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HRS	76 PCS	0/1
6	DC Operating Life	TEMP : 25°C I <sub>F</sub> =20mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C / 85%RH	1000 HRS	76 PCS	0/1

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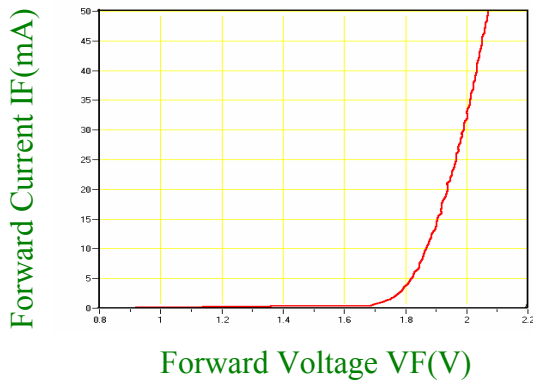
5 mm

Round

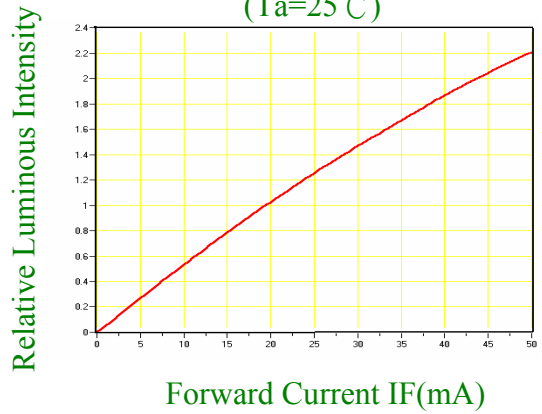
Type : LED Lamps

■ Typical Electrical / Optical Characteristics Curves :

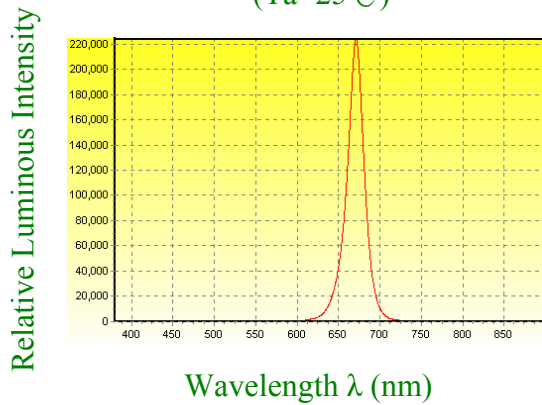
IF-VF(Ta=25°C)



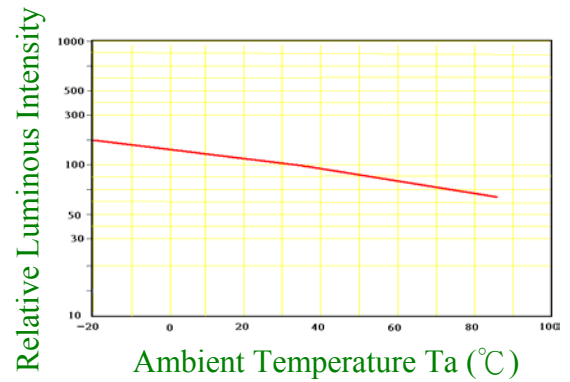
Relative Luminous Intensity-IF (Ta=25°C)



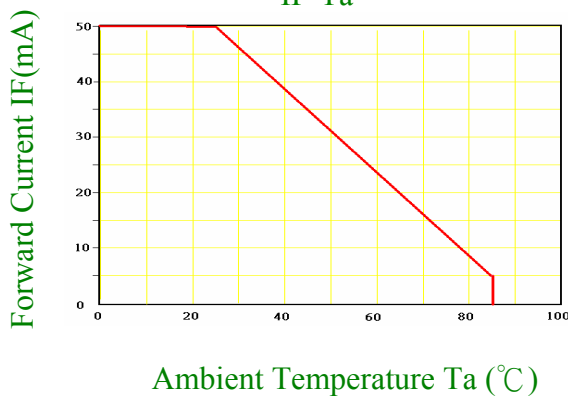
Wavelength Characteristics (Ta=25°C)



Relative Luminous Intensity-Ta



IF-Ta



Directive Characteristics (Ta=25°C)

