

Feature

- High Luminous Output Red LED Lamp
- Chip Technology — AlInGaP
- Red Diffused 5mm Packages
- Viewing Angle **50** Degree (Reference)

SDL-2R3KE-LT1

Specification

Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
DC Forward Current	I_F	30	mA
Peak Pulsed Forward Current ※	I_{FP}	90	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_d	75	mW
Operating Temperature	T_{opr}	-40 ~ +100	°C
Storage Temperature	T_{stg}	-55 ~ +100	°C
Solder Dipping Temperature	T_{sld}	260°C for 5 sec	

※ I_{FP} = Pulse Width \leq 10 ms, Duty Ratio \leq 1/10

Electrical / Optical Characteristics

$T_a = 25^\circ\text{C}$

Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$		2.05	2.50	V
Reverse Current	I_R	$V_R=5\text{V}$			100	μA
Luminous Intensity	I_V	$I_F=20\text{mA}$	90	200		mcd
Dominant Wavelength	λ_d	$I_F=20\text{mA}$		624		nm
Peak Wavelength	λ_p	$I_F=20\text{mA}$		632		nm
Spectral Half Width	$\Delta \lambda_{1/2}$	$I_F=20\text{mA}$		20		nm



Electrostatic Sensitive Devices

Luminous Intensity Bin Table

IF=20mA

Rank name	Min (mcd)	Max (mcd)
S4	90	148
S3	148	222
S2	222	333
S1	333	

※ Tolerance for each bin limit is $\pm 15\%$

Color Bin Table

IF=20mA

Rank name	Min (nm)	Max (nm)
KE4	617	621
KE3	621	625
KE2	625	629
KE1	629	622

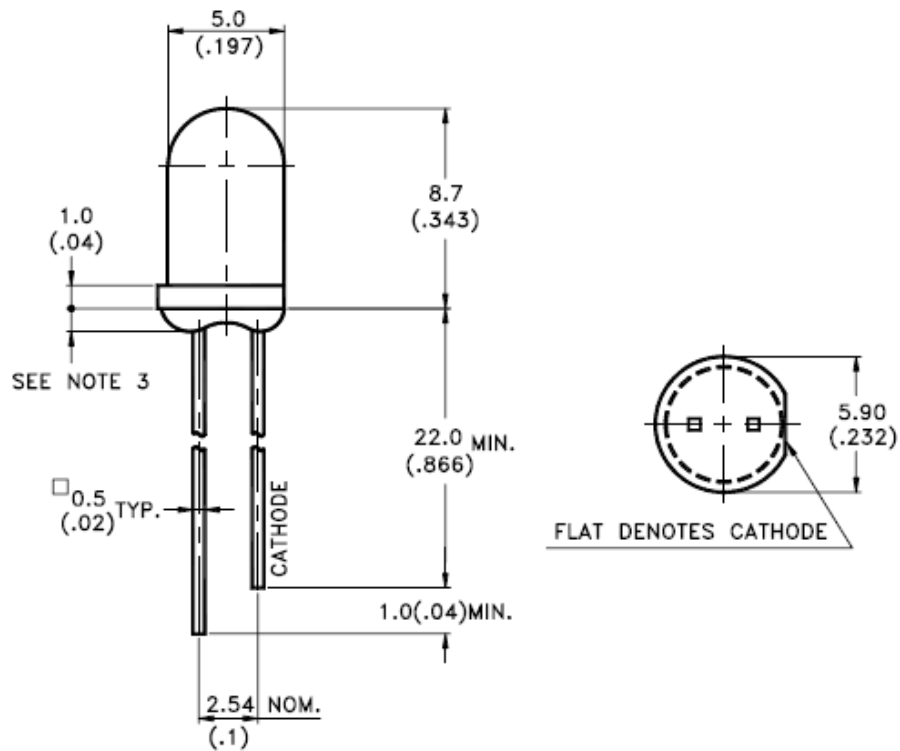
※ Tolerance for each bin limit is $\pm 1\text{nm}$

Note

1. One delivery will include several color ranks and I_v ranks of products.
The quantity-ratio of the different rank is decided by Sander.
2. Bin Name typed on the Label: IV RANK + Color Rank.
3. Sander has the right to update the information without notice.
Please double confirm the Spec details before place an order.

Outline Dimensions

Lamps with Standoffs



Item	Materials
Resin	Epoxy Resin
Lead Frame	Ag Plating on SPCC

Note

1. All Dimensions are in Millimeters
2. Tolerance is +/- 0.25mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm max.



Electrostatic Sensitive Devices

Electrical-Optical Characteristics

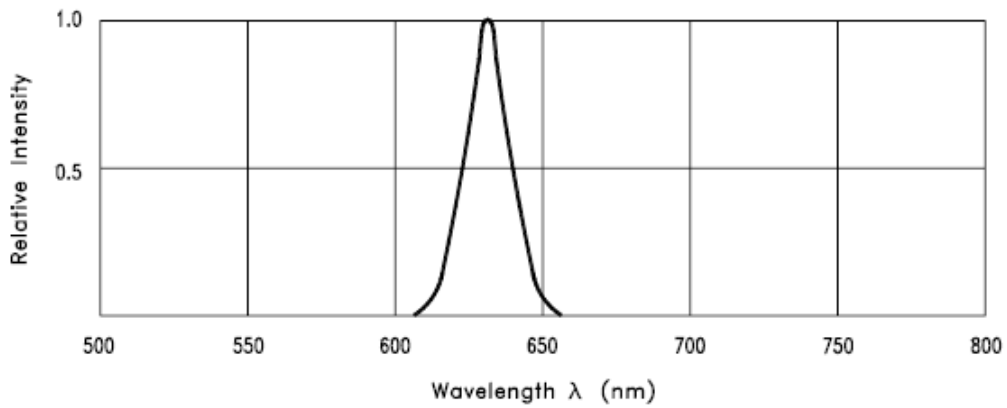


Fig.1 Relative Intensity vs. Wavelength

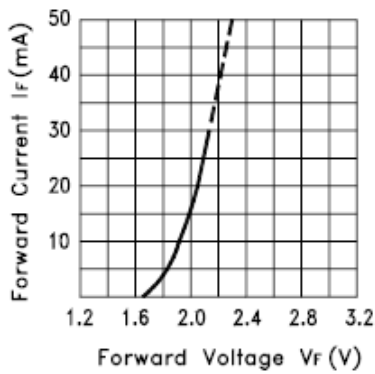


Fig.2 Forward Current vs. Forward Voltage

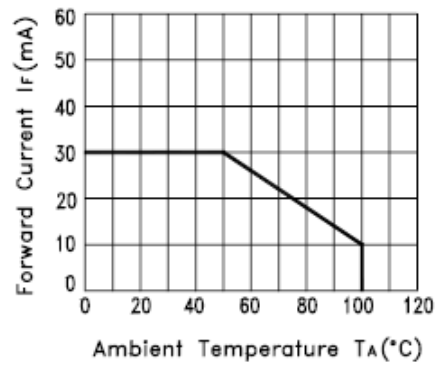


Fig.3 Forward Current Derating Curve

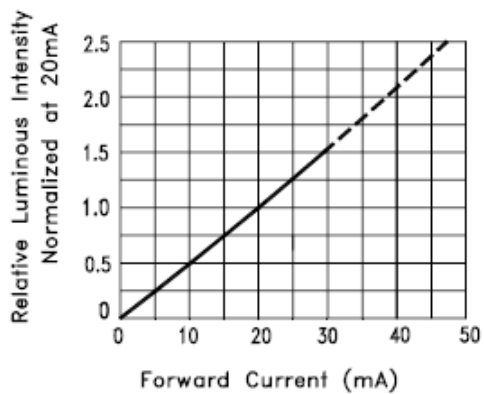


Fig.4 Relative Luminous Intensity vs. Forward Current

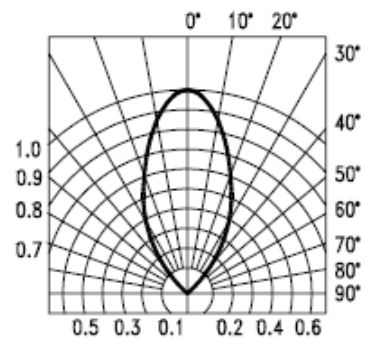


Fig.5 Spatial Distribution



Soldering Conditions - Lamp Type LED

- Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended
- Recommended soldering conditions

Dip Soldering	
Pre-Heat	100°C Max.
Pre-Heat Time	60 sec. Max.
Solder Bath Temperature	260°C Max.
Dipping Time	10 sec. Max.
Dipping Position	No lower than 3mm from the base of the epoxy bulb.

Hand Soldering	
	30 Series
Temperature	300°C Max.
Soldering time	3 sec. Max.
Position	No closer than 3mm from the base of the epoxy bulb.

- Do not apply any stress to the lead, particularly when heated
- The LEDs must not be repositioned after soldering
- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion, but, the User will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. Sander's LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.
- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- Cut the LED leadframes at room temperature. Cutting the leadframes at high temperatures may cause LED failure.

