

## SDL-5N3HTY-N5

### Feature

- High Luminous Output Yellow LED Lamp
- Chip Technology – AlInGaP/AlN
- Standard 5mm (T-1 3/4) Water Clear Packages
- Viewing Angle **15** Degree (Reference)

### Specification

#### Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
DC Forward Current	$I_F$	50	mA
Peak Pulsed Forward Current ※	$I_{FP}$	100	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_d$	120	mW
Operating Temperature	$T_{opr}$	-30 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +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	$V_F$	$I_F=20\text{mA}$		2.1	2.4	V
Reverse Current	$I_R$	$V_R=5\text{V}$			50	$\mu\text{A}$
Luminous Intensity	$I_V$	$I_F=20\text{mA}$	9300	16000	27300	mcd
Dominant Wavelength	$\lambda_d$	$I_F=20\text{mA}$	585	590	595	nm
Peak Wavelength	$\lambda_p$	$I_F=20\text{mA}$		593		nm
Spectral Half Width	$\Delta \lambda_{1/2}$	$I_F=20\text{mA}$		15		nm



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## Luminous Intensity Bin Table

IF=20mA

Rank name	Min (mcd)	Max (mcd)
<b>Y</b>	<b>9300</b>	<b>12000</b>
<b>Z</b>	<b>12000</b>	<b>15700</b>
<b>ZA</b>	<b>15700</b>	<b>21000</b>
<b>ZB</b>	<b>21000</b>	<b>27300</b>

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

## Color Bin Table

IF=20mA

Rank name	Min (nm)	Max (nm)
<b>1</b>	<b>585</b>	<b>587.5</b>
<b>2</b>	<b>587.5</b>	<b>590</b>
<b>3</b>	<b>590</b>	<b>592.5</b>
<b>4</b>	<b>592.5</b>	<b>595</b>

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

### Note

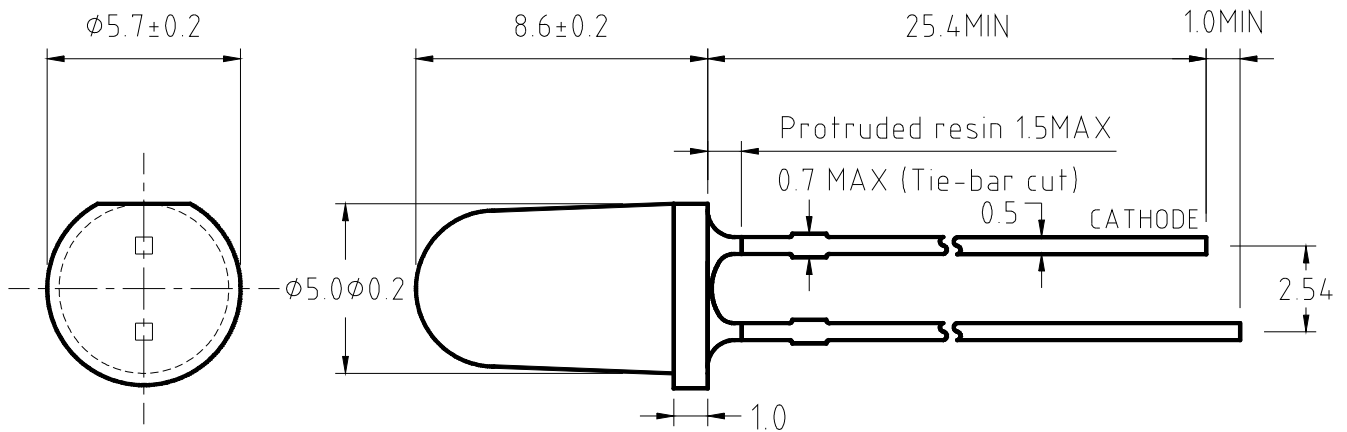
1. One delivery will include several color ranks and  $I_v$  ranks of products.  
The quantity-ratio of the different rank is decided by Sander.
2. Bin Name typed on the Label: IV RANK + Color Rank.  
For Example, **BIN ZA2 Means IV: 15700~21000mcd and Color: 587.5nm~590nm**
3. Sander has the right to update the information without notice.  
Please double confirm the Spec details before place an order.



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## Outline Dimensions

### Lamps without Standoffs



Item	Materials
Resin	Epoxy Resin
Lead Frame	Ag Plating on SPCC

### Note

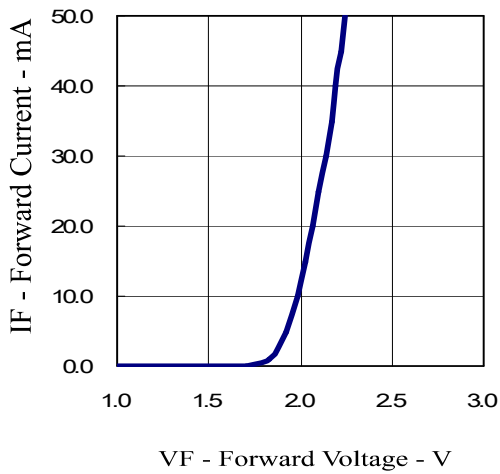
- All Dimensions are in Millimeters



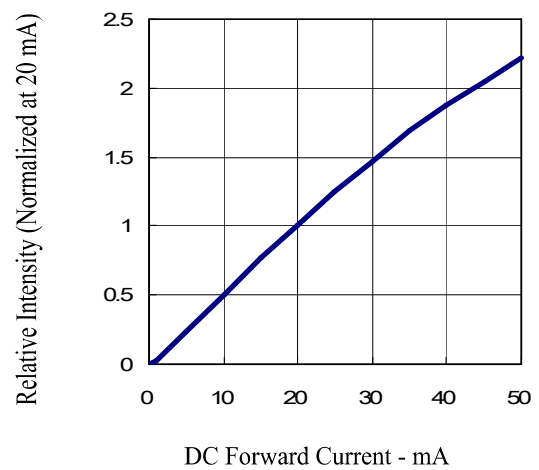
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# Electrical-Optical Characteristics

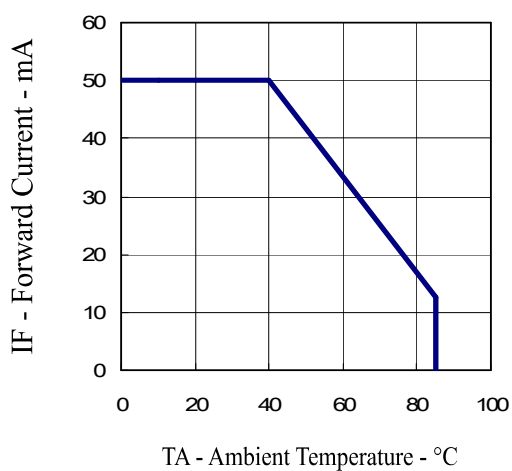
Forward Current vs. Forward Voltage



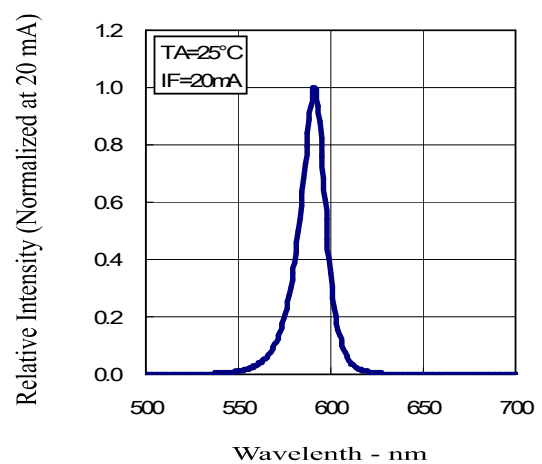
Relative Intensity vs. Forward Current



Forward Current vs. Ambient Temperature



Relative Intensity vs. Wavelength



## 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

<b>Dip Soldering</b>	
<b>Pre-Heat</b>	100°C Max.
<b>Pre-Heat Time</b>	60 sec. Max.
<b>Solder Bath Temperature</b>	260°C Max.
<b>Dipping Time</b>	5 sec. Max.
<b>Dipping Position</b>	No lower than 3mm from the base of the epoxy bulb.

<b>Hand Soldering</b>		
	<b>3Ø Series</b>	<b>Others (Including Lead-Free Solder)</b>
<b>Temperature</b>	300°C Max.	350°C Max.
<b>Soldering time</b>	3 sec. Max.	3 sec. Max.
<b>Position</b>	No closer than 3mm from the base of the epoxy bulb.	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.