



## SPECIFICATION

Description:

30 Degree 5mm LITEFO Lamp in High  
Red Color with Water Transparent  
Lens and No Stopper

Dice Material: AlGaInP

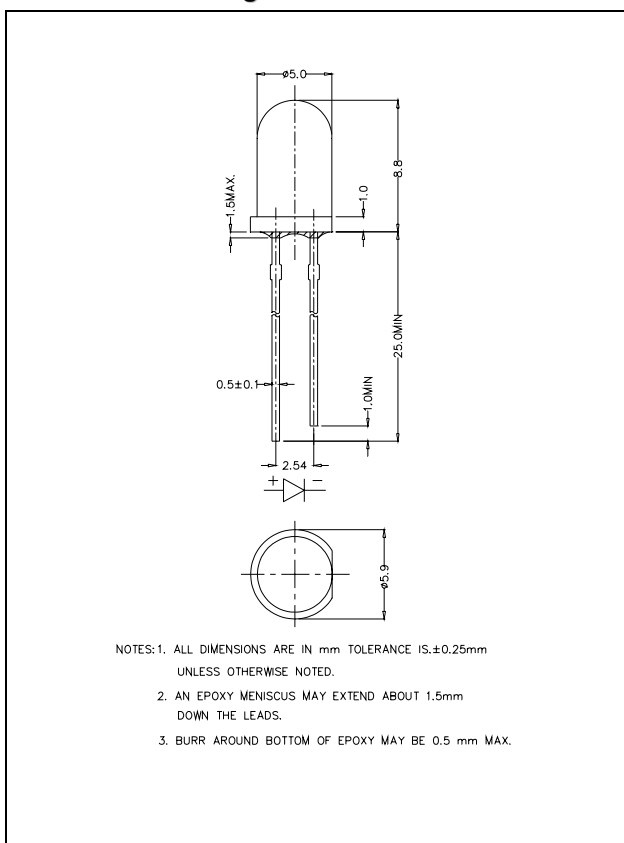
MODEL No : FC530ANHR21



Confirmed  
by Customer: \_\_\_\_\_

Date: \_\_\_\_\_

## Dimension Drawing



## Applications

- Advertising Signs
- Indicators
- Traffic
- Automotive Lighting

## Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Items                              | Symbol    | Absolute maximum Rating  | Unit             |
|------------------------------------|-----------|--|------------------|
| Forward Current <sup>*2</sup>      | $I_F$     | 50   | mA               |
| Peak Forward Current <sup>*1</sup> | $I_{FP}$  | 200  | mA               |
| Reverse Voltage                    | $V_R$     | 5  | V                |
| Power Dissipation                  | $P_D$     | 125  | mW               |
| Operation Temperature              | $T_{opr}$ | $-40 \sim +95$   | $^\circ\text{C}$ |
| Storage Temperature                | $T_{stg}$ | $-40 \sim +100$  | $^\circ\text{C}$ |
| Lead Soldering Temperature         | $T_{sol}$ | Max.260 $^\circ\text{C}$ for 3 sec Max.<br>(3mm from the base of the epoxy bulb) |                  |

\*1 pulse width  $\leq 0.1$ msec duty  $\leq 1/10$

\*2 For long term performance the drive currents between 10mA and 30mA are recommended. Please contact LITEFO sales representative for more information on recommended drive conditions.

## Typical Electrical & Optical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Items               | Symbol              | Condition           | Min. | Typ. | Max. | Unit          |
|---------------------|---------------------|---------------------|------|------|------|---------------|
| Forward Voltage     | $V_F$               | $I_F = 20\text{mA}$ | ---  | 2.0  | 2.5  | V             |
| Reverse Current     | $I_R$               | $V_R = 5\text{V}$   | ---  | ---  | 100  | $\mu\text{A}$ |
| Dominant Wavelength | $\lambda_D$         | $I_F = 20\text{mA}$ | 620  | 624  | 628  | nm            |
| Luminous Intensity  | $I_v$               | $I_F = 20\text{mA}$ | 1520 | 2000 | ---  | mcd           |
| 50% Power Angle     | $2\theta_{1/2}$ H-H | $I_F = 20\text{mA}$ | ---  | 30   | ---  | deg           |

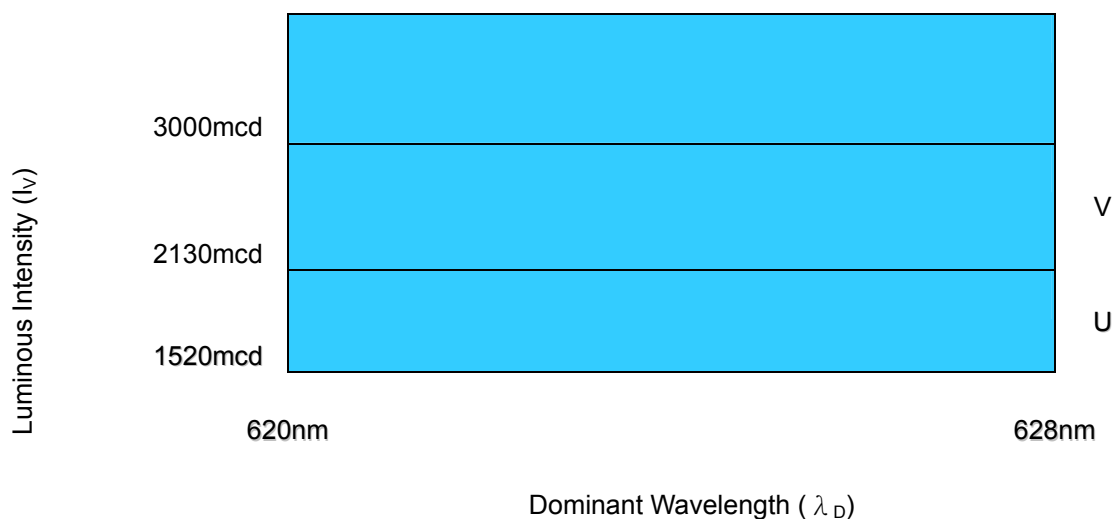
### Standard bins for FC530ANHR21 ( $I_F = 20\text{mA}$ ):

Lamps are sorted to Luminous Intensity – $I_V$ ,  $V_F$  & Dominant Wavelength –  $\lambda_D$  bins shown.

Orders for FC530ANHR21 may be filled with any or all bins contained as below.

All Luminous Intensity – $I_V$ ,  $V_F$  & Dominant Wavelength –  $\lambda_D$  values shown and specified are at  $I_F = 20\text{mA}$ .

\* **U+**



\* U+ indicates Luminous Intensity is at U bin or above.

### Forward Voltage ( $V_F$ )

| Rank    | V1       | V2       | V3       | V4       | V5       |
|---------|----------|----------|----------|----------|----------|
| Voltage | 1.6-1.8V | 1.8-2.0V | 2.0-2.2V | 2.2-2.4V | 2.4-2.6V |

### Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be determined by LITEFO.
- 2) Pb content <1000PPM.
- 3) Tolerance of measurement of luminous intensity is  $\pm 15\%$ .
- 4) Tolerance of measurement of dominant wavelength is  $\pm 1\text{nm}$ .
- 5) Tolerance of measurement of  $V_f$  is  $\pm 0.05\text{V}$ .

## Graphs

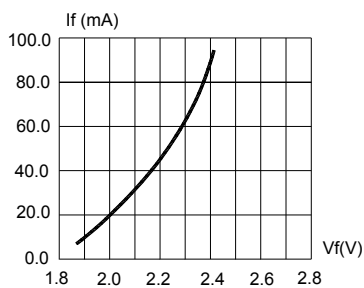


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

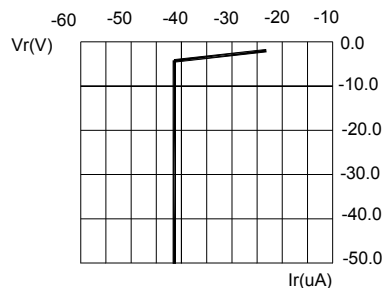


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

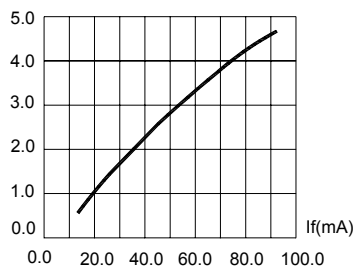


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

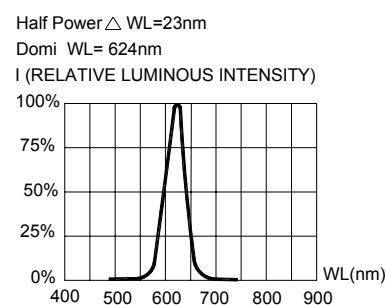


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

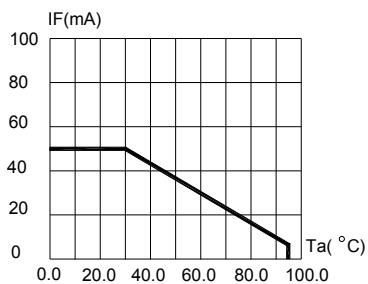


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ( $T_{jmax}=105^{\circ}\text{C}$ )

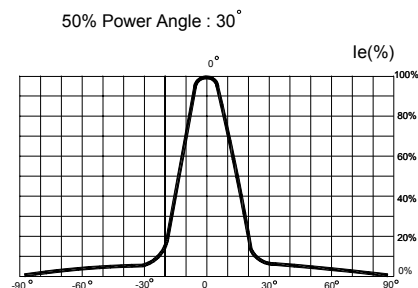


FIG.6 FAR FIELD PATTERN

| Items       | Signatures    | Date       | Revision History |  |
|-------------|---------------|------------|------------------|--|
| Prepared by | Lois          | 2004/10/06 | DOC. No.         | CHANGE DESCRIPTION   |
| Checked by  | Jarvis        | 2004/10/06 | 02 06Oct04       | Add ESD and Notes; Change FIG.1&3&5; Change IV & $\lambda_D$ Rank form |
| Approved by | D.W.Liu       | 2004/10/06 |                  |  |
| ECN#        | ECN-H20040274 |            |                  |  |

Data is subject to change without prior notice.

Obsoletes Doc: A 20Apr04.