



## SPECIFICATION

Description:

30 Degree 5mm Round LITEFO Lamp  
in Reddish Orange Color with Water  
Transparent Lens and No Stopper

Dice Material: AlGaInP

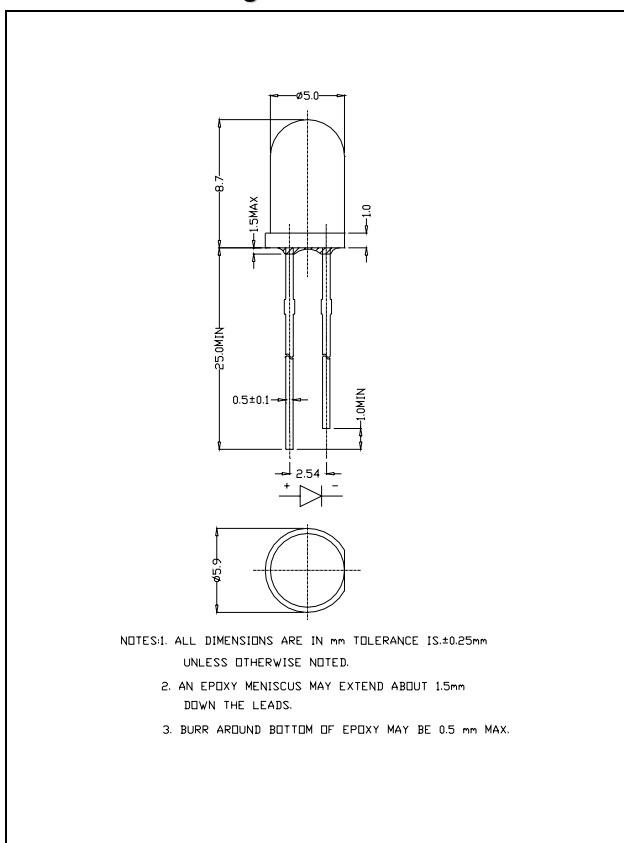
MODEL No : FC530AMSO21



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

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

## Dimension Drawing



## Applications

- Advertising Signs
- Indicators
- Message Board

## 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 | $\lambda_D$         | $I_F = 20\text{mA}$ | 610  | 615  | 620  | nm            |
| Luminous Intensity  | $I_v$               | $I_F = 20\text{mA}$ | 770  | 1300 | ---  | mcd           |
| 50% Power Angle     | $2\theta_{1/2}$ H-H | $I_F = 20\text{mA}$ | ---  | 30   | ---  | deg           |

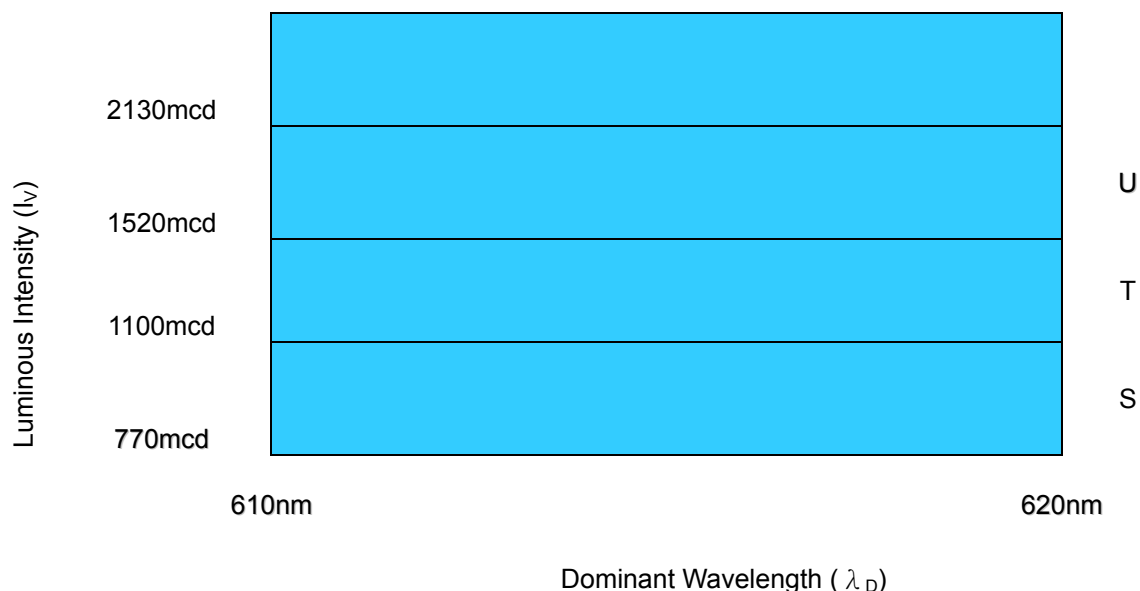
### Standard bins for FC530AMSO21 ( $I_F = 20\text{mA}$ ):

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

Orders for FC530AMSO21 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  $I_F = 20\text{mA}$ .

\* **S+**



\* S+ indicates Luminous Intensity is at S 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  $\pm 0.05\text{V}$ .

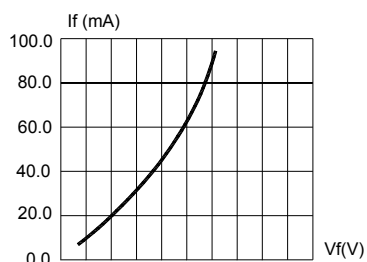


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

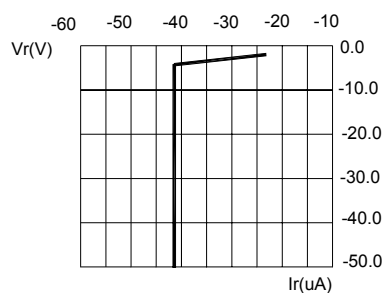


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

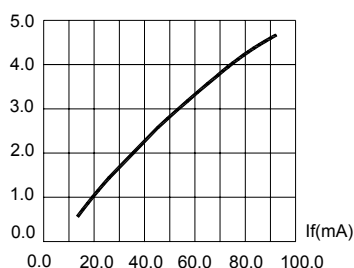


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

Half Power  $\Delta WL = 20nm$   
Domi WL = 615nm

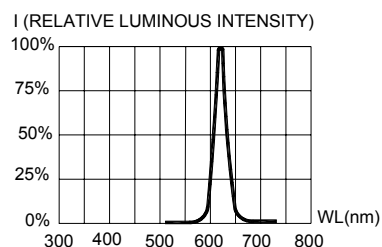


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

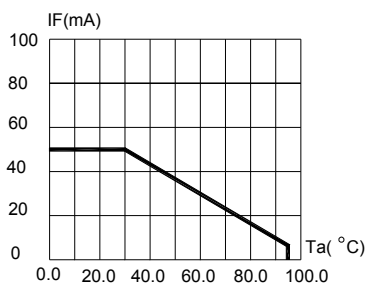


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ( $T_{jmax}=105^{\circ}C$ )

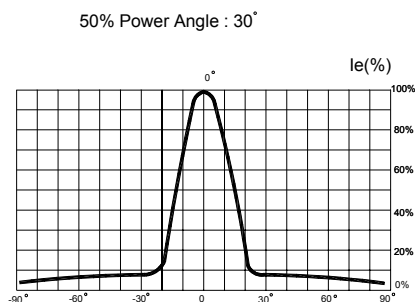


FIG.6 FAR FIELD PATTERN

| Items       | Signatures    | Date       | Revision History |   |
|-------------|---------------|------------|------------------|---|
| Prepared by | Lois          | 2004/10/07 | DOC. No.         | CHANGE DESCRIPTION  |
| Checked by  | Jarvis        | 2004/10/07 | 02 07Oct04       | Add ESD and Notes; Change FIG.1&3&5; Change IV & $\lambda_D$ Rank form. |
| Approved by | D.W.Liu       | 2004/10/07 |                  |   |
| ECN#        | ECN-H20040274 |            |                  |   |

Data is subject to change without prior notice.

Obsoletes Doc: A 20Apr04.