



## SPECIFICATION

Description:

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

Dice Material: AlGaInP

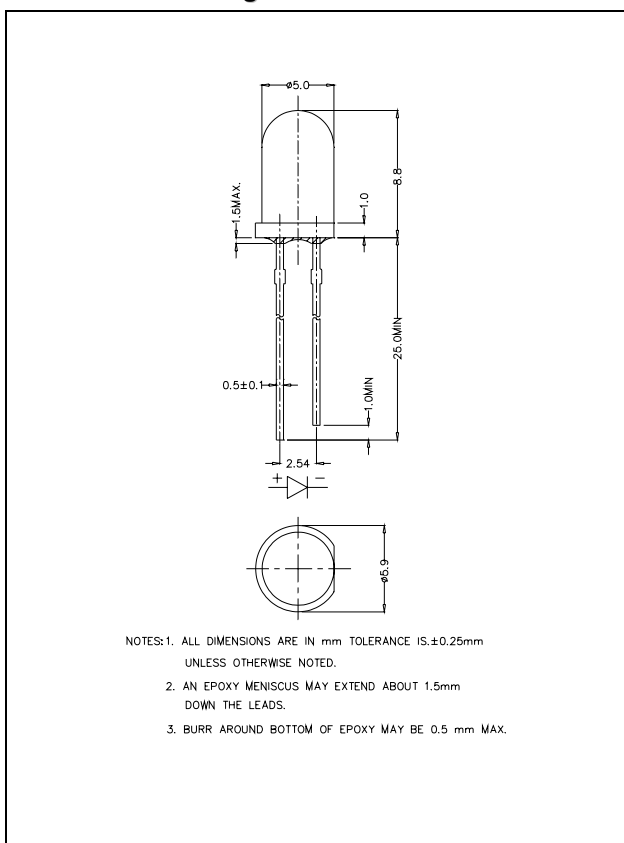
MODEL No : FC530AMHR21



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. (3mm from the base of the epoxy bulb)	

\*1 pulse width  $\leq 0.1\text{msec}$  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	$I_v$	$I_F = 20\text{mA}$	770	1400	---	mcd
50% Power Angle	$2\theta_{1/2}$ H-H	$I_F = 20\text{mA}$	---	30	---	deg

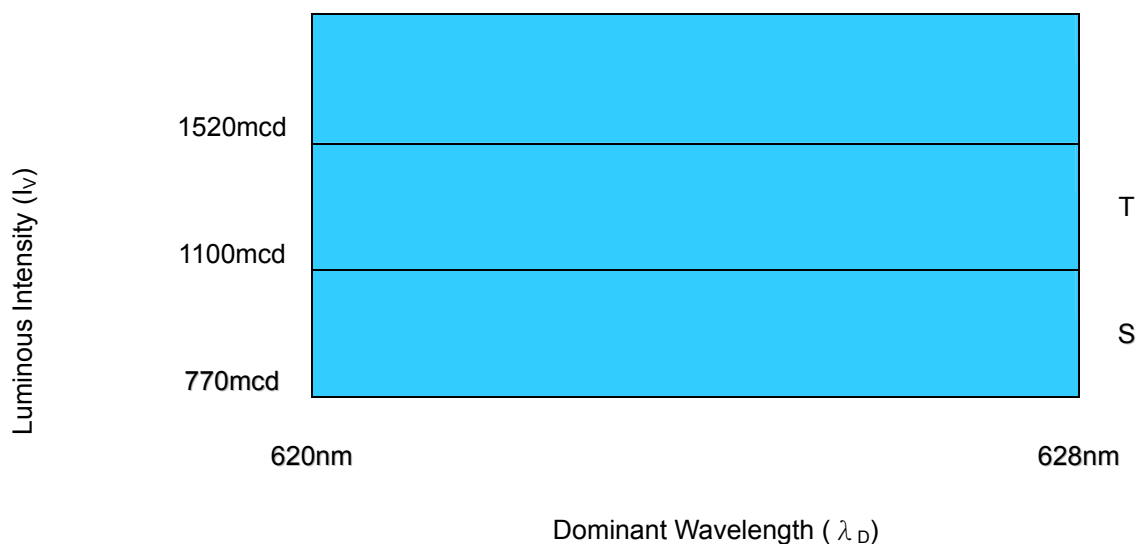
### Standard bins for FC530AMHR21 ( $I_F = 20\text{mA}$ ):

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

Orders for FC530AMHR21 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  $\pm 0.05\text{V}$ .

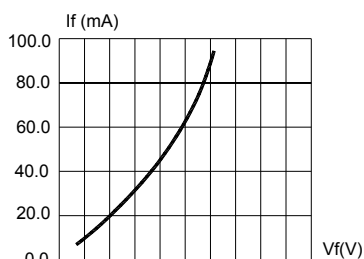


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

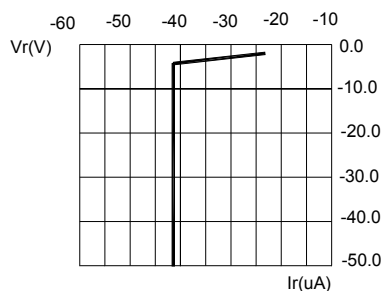


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

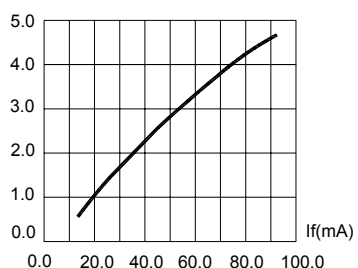


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

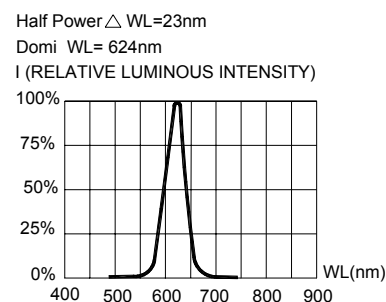


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

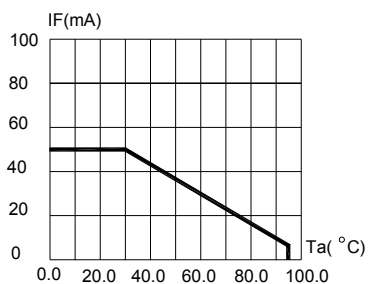


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ( $T_{jmax}=105^{\circ}\text{C}$ )

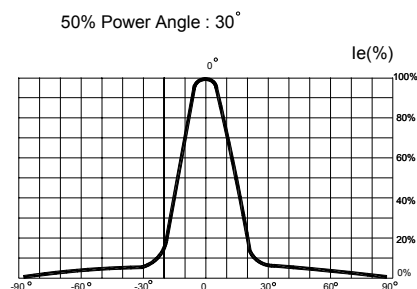


FIG.6 FAR FIELD PATTERN

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.