



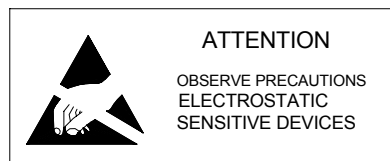
SPECIFICATION

Description:

40 Degree 5mm Round LITEFO Lamp
in Blue Color with White Diffused Lens
and No Stopper

Dice Material: InGaN

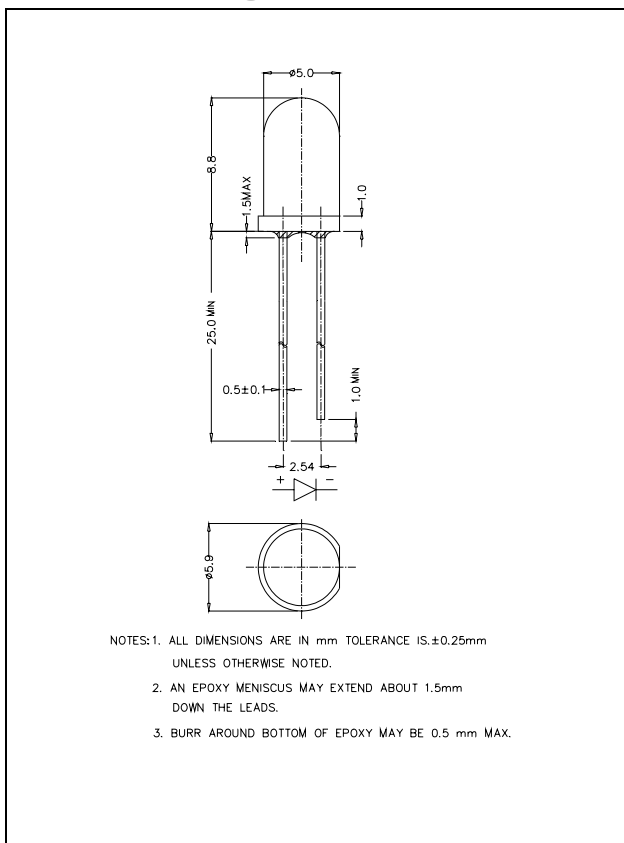
MODEL No : FC540BNBL21



Confirmed
by Customer: _____

Date: _____

Dimension Drawing



Applications

- Advertising Signs
- Indicators
- LCD Back Light
- Moving Message Signs

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

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I_F	25	mA
Peak Forward Current*	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	105	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°C for 3 sec Max. (3mm from the base of the epoxy bulb)	

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

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	---	3.6	4.2	V
Reverse Current	I_R	$V_R = 5\text{V}$	---	---	100	μA
Dominant Wavelength	λ_D	$I_F = 20\text{mA}$	465	470	475	nm
Luminous Intensity	I_v	$I_F = 20\text{mA}$	145	250	---	mcd
50% Power Angle	$2\theta_{1/2}$ H-H	$I_F = 20\text{mA}$	---	40	---	deg

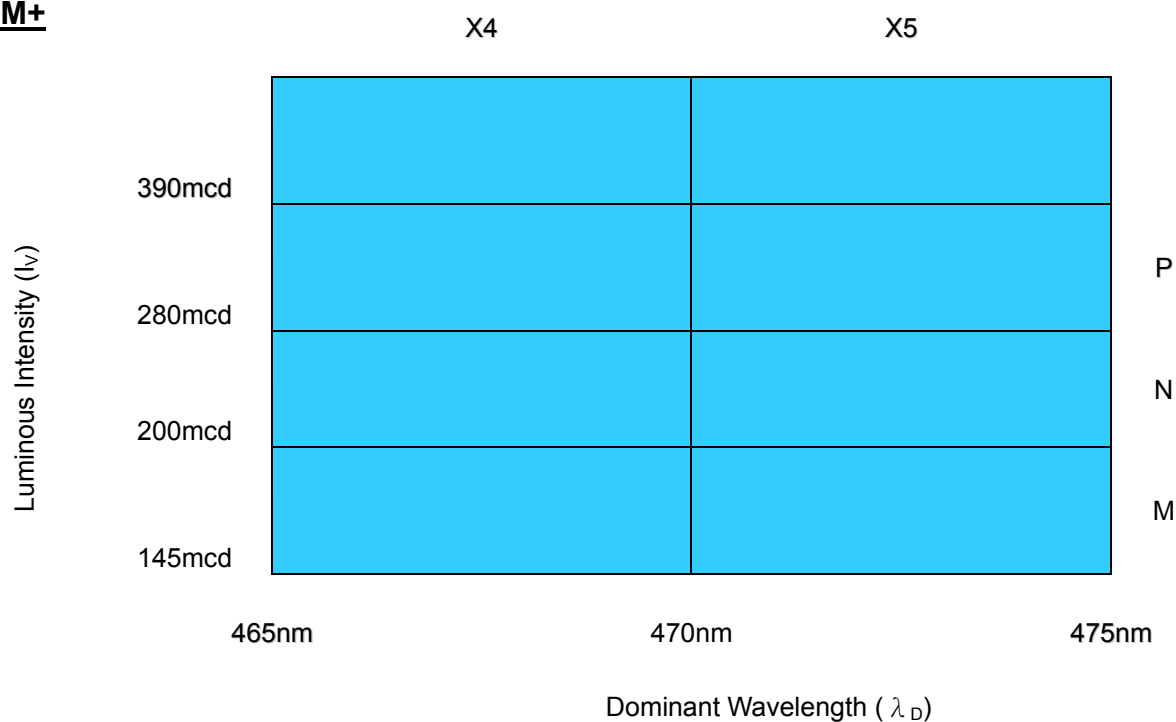
Standard bins for FC540BNBL21 ($I_F = 20\text{mA}$):

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

Orders for FC540BNBL21 may be filled with any or all bins contained as below.

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

* **M+**



* M+ indicates Luminous Intensity is at M bin or above.

Forward Voltage (V_F)

Rank	V8	V9	V10	V11	V12	V13
Voltage	3.0-3.2V	3.2-3.4V	3.4-3.6V	3.6-3.8V	3.8-4.0V	4.0-4.2V

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 $\pm 0.05\text{ V}$.

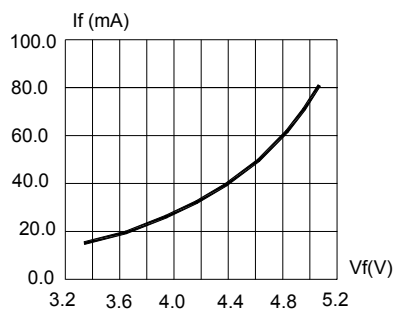


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

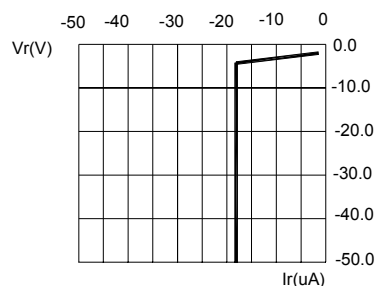


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

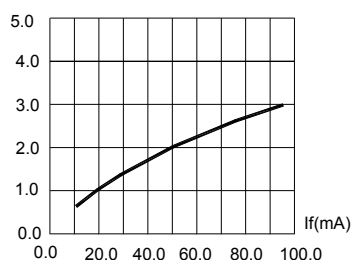


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

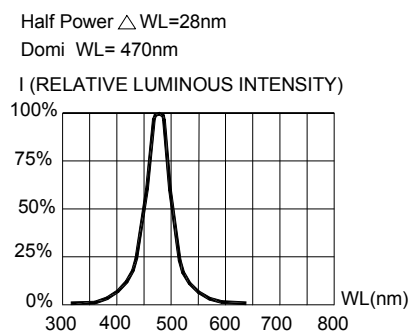


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

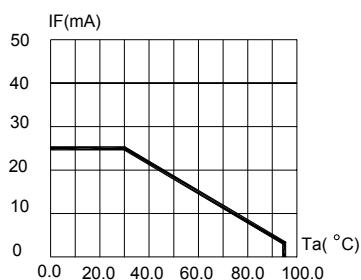


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE (Tjmax=105 °C)

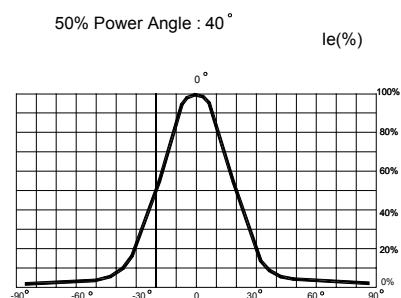


FIG.6 FAR FIELD PATTERN

Items	Signatures	Date	Revision History	
Prepared by	Lois	2004/10/07	DOC. No.	CHANGE DESCRIPTION
Checked by	Jarvis	2004/10/07	B 24Jun04	VF add V8. Add Pb Free sign.
Approved by	D.W.Liu	2004/10/07	03 07Oct04	Change T _{opr} & T _{stg} ; Change FIG.1&3&5; Change IV&λ _D Rank form.
ECN#	ECN-H20040274			

Data is subject to change without prior notice.

Obsoletes Doc: B 24Jun04.