



SPECIFICATION

Description:

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

Dice Material: InGaN

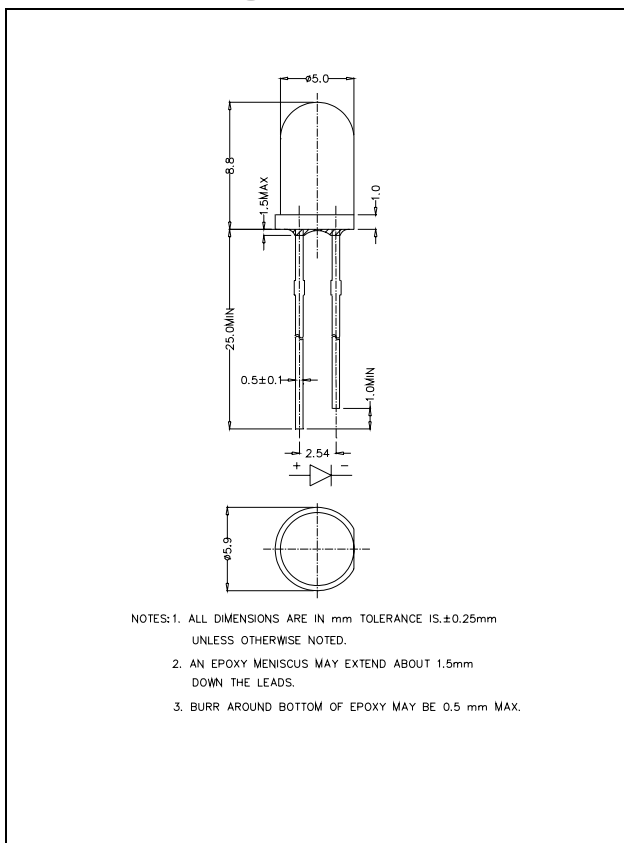
MODEL No : FC530APBG21



Confirmed
by Customer: _____

Date: _____

Dimension Drawing



Applications

- Advertising Signs
- Indicators
- Traffic

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 | $I_F = 20\text{mA}$ | 500 | 505 | 510 | nm |
| Luminous Intensity | I_v | $I_F = 20\text{mA}$ | 3000 | 4800 | --- | mcd |
| 50% Power Angle | $2\theta_{1/2}$ H-H | $I_F = 20\text{mA}$ | --- | 30 | --- | deg |

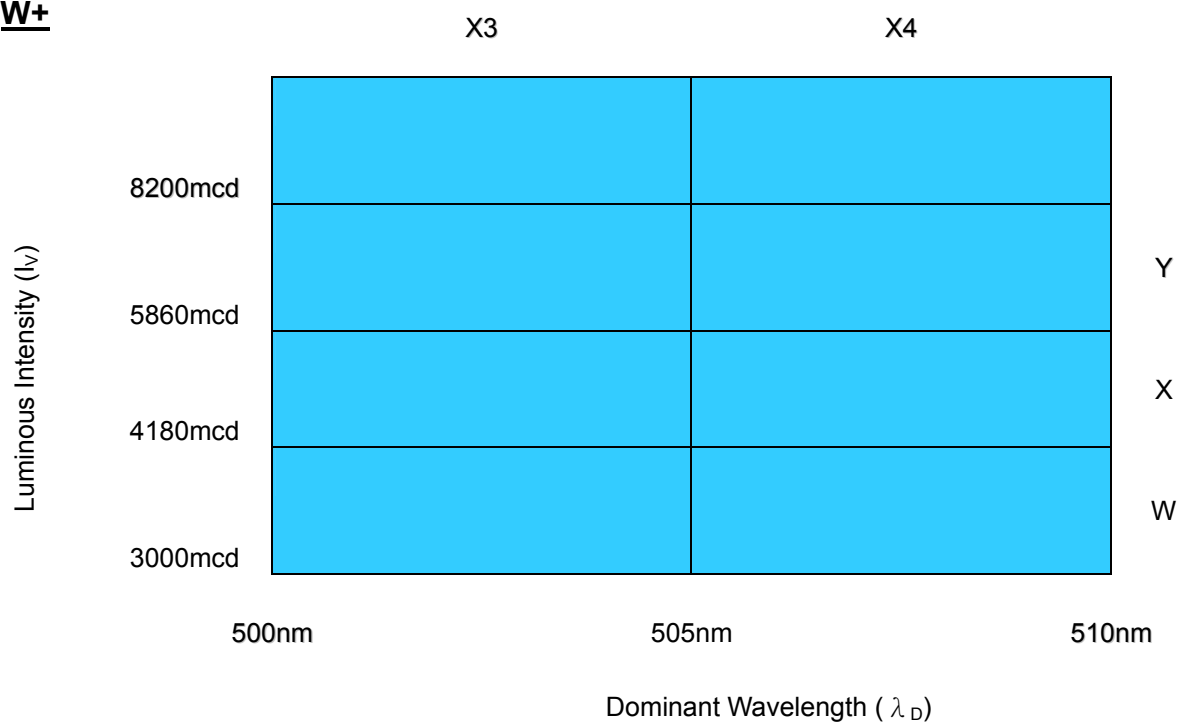
Standard bins for FC530APBG21 ($I_F = 20\text{mA}$):

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

Orders for FC530APBG21 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 $I_F = 20\text{mA}$.

* **W+**



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

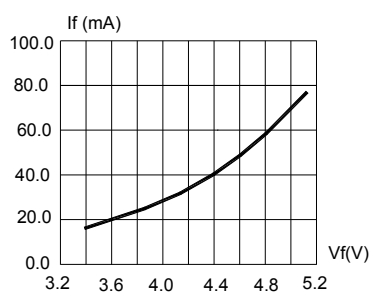


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

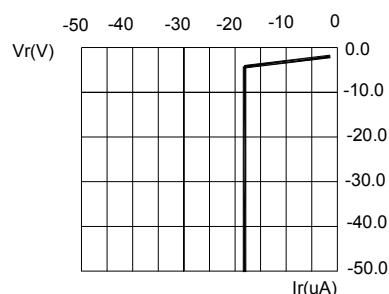


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

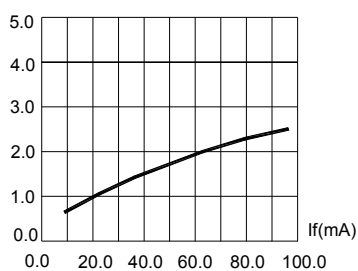


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

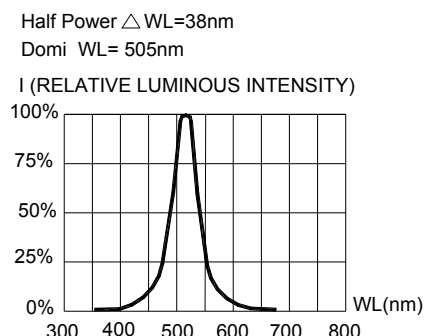


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

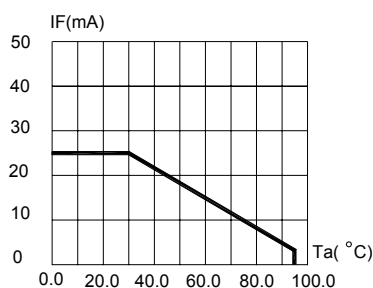


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ($T_{jmax}=105^{\circ}C$)

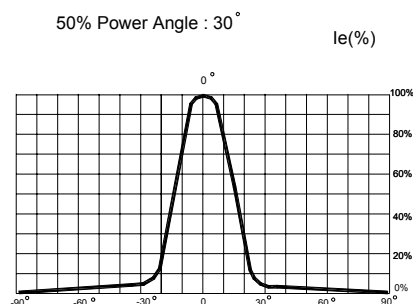


FIG.6 FAR FIELD PATTERN

| Items | Signatures | Date | Revision History | |
|-------------|---------------|------------|------------------|--|
| Prepared by | Lois | 2004/10/07 | DOC. No. | CHANGE DESCRIPTION |
| Checked by | Jarvis | 2004/10/07 | 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.