

Model: L-TPB1 -C01

120 Degree 3.2 x 2.8mm SMT-LED in Blue Color with Water Transparent

Dice Material:

InGaN

Applications:

- Indicators
- Illuminations
- LCD Back Lights
- Automobile's Applications
- RGB Full Color Displays

Absolute Maximum Ratings at Ta = 25°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 ~ + 100	°C
Storage Temperature	T_{stg}	-40 ~ + 100	°C
Junction temperature	T_j	+110	°C
Junction/ambient **	R_{thJA}	450	°C/W
Junction/solder point	R_{thJS}	300	°C/W

*pulse width $\leq 0.1\text{msec}$ duty $\leq 1/10$ ** Rth test condition: Mounted on PC Board FR 4(pad size $\geq 16\text{mm}^2$)

Typical Electrical & Optical Characteristics (Ta = 25°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	$V_R = 5\text{V}$	---	---	10	μA
Luminous Intensity	I_v	$I_F = 20\text{mA}$	112	160	---	mcd
Dominant Wavelength	λ_D	$I_F = 20\text{mA}$	460	470	480	nm
50% Power Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	---	120	---	deg

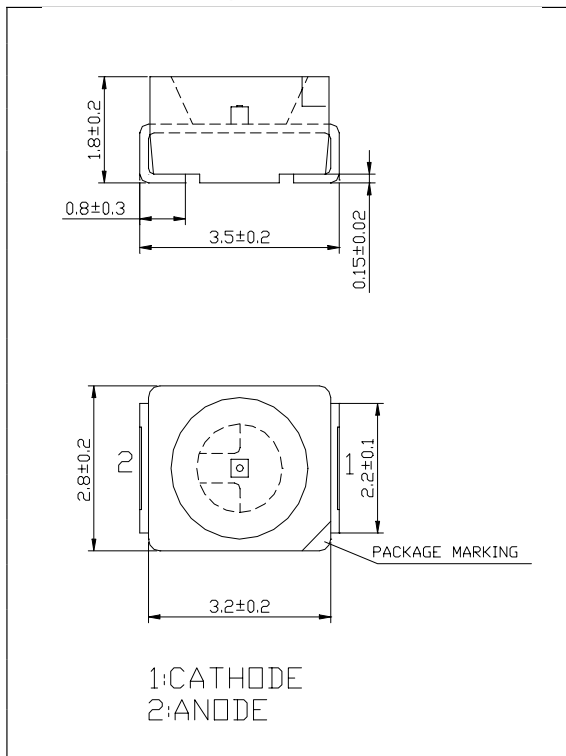
Ranks Combination ($I_F = 20\text{mA}$)

Rank	R1	R2	S1
Luminous Intensity	112-140mcd	140-180mcd	180-224mcd

Important Notes:

- 1) Tolerance of measurement of luminous intensity is $\pm 10\%$
- 2) Tolerance of measurement of dominant wavelength is $\pm 1\text{nm}$
- 3) Tolerance of measurement of V_f is $\pm 0.05\text{V}$.

Dimension Drawing



Graphs

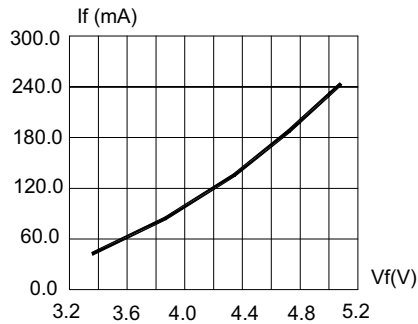


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

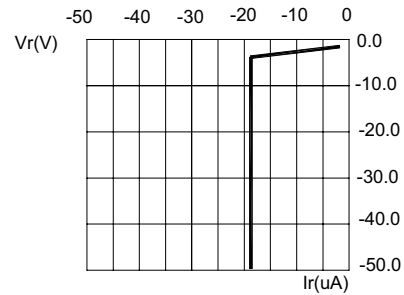
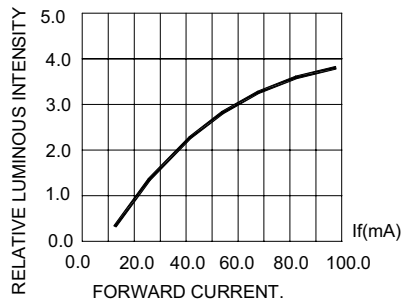


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.



FORWARD CURRENT.

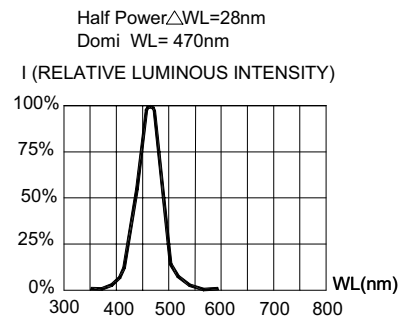


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

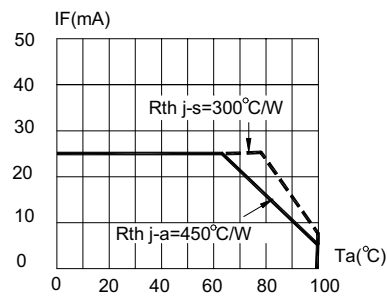


FIG.5 MAXIMUM FORWARD DC CURRENT VS. TEMPERATURE. DERATING BASED ON $T_{jmax} = 110^{\circ}C$

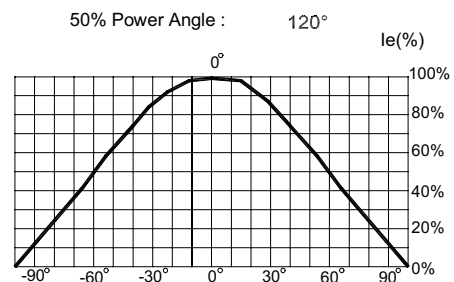


FIG.6 SPATIAL DISTRIBUTION.