1. Descriptions

The KP3528W06A2I is a White Color LED consisting of small and thin plastic leaded chip carrier (PLCC) 2-pin package, InGaN blue chip and phoshpr.

2. Features

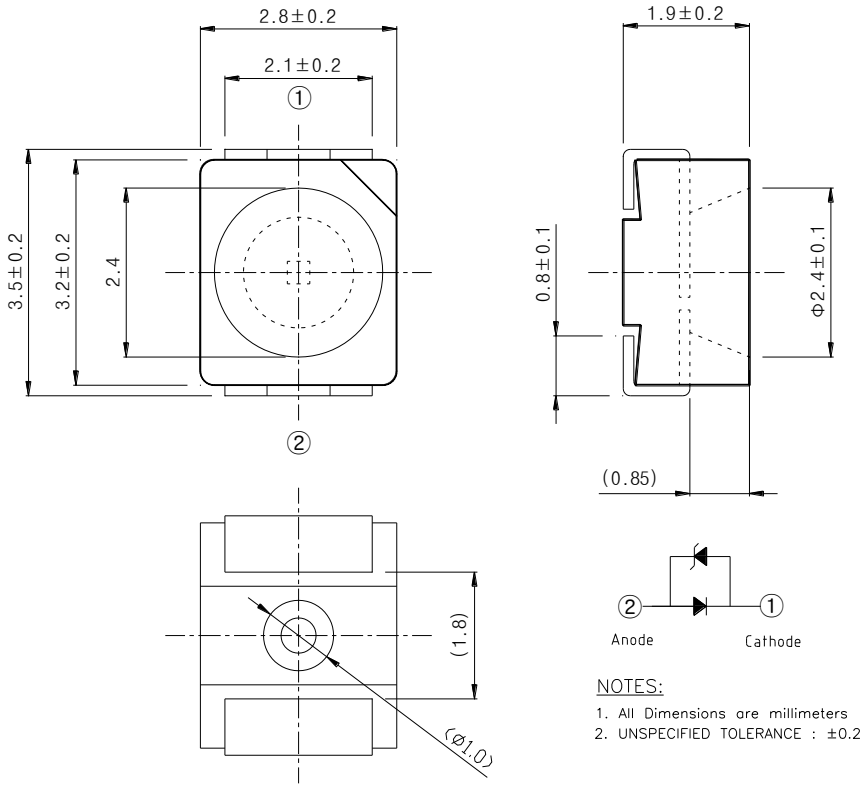
- Small Footprint Surface Mount Package (3.5 L × 2.8 W × 1.9 H [mm^3])
- Typical Forward Voltage(V_F) : 3.2 V @ Forward Current(I_F)=20mA
- Operation Temperature from -40℃ to +100℃
- Soldering methods : Reflow soldering
- JEDEC MSL level : 3
- Taping : 9㎜ conductive black carrier tape & antistatic clear cover tape

3. Applications

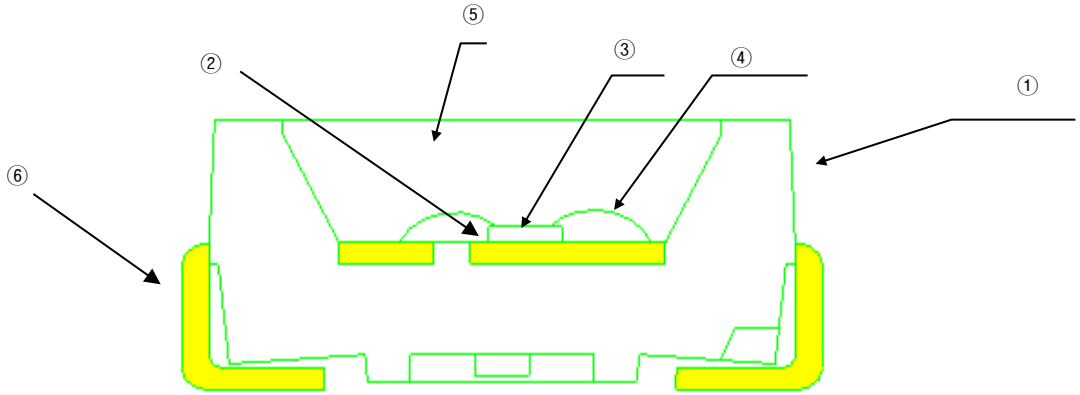
- Interior lighting
- General lighting
- Indoor and out door displays
- Architectural / Decorative lighting

4. Outline Dimensions and Material Descriptions

◆ Outline Dimensions



◆ Material Descriptions



No.	Item	Material
①	Package	PPA
②	Die Adhesive	Clear Sillicone
③	LED Chip	InGaN
④	Wire	Au
⑤	Encapsulant	Clear Sillicone + Phsphor
⑥	Lead	Fe Alloy

5. Absolute Maximums

Item	Symbol	Min.	Max.	Unit	Conditions
Forward Current	I_F	-	30	mA	
Peak Forward Current*1	I_{FP}	-	100	mA	
Power Dissipation	P_D	-	114	mW	
Reverse Voltage	V_R	-	5	V	
Operating Temperature	T_{OP}	-40	100	℃	
Storage Temperature	Ts	-40	100	℃	
Soldering Temperature* 2	T_{sol}	-	260	℃	

*1. IFP was measured at Tw ≤ 1 msec of pulse width and D ≤ 1/10 of duty ratio.

*2. Soldering time : 5 Sec

6. Electro-Optical Characteristics (T_A = 25℃)

Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage*3	V_F	2.8	3.2	3.7	V	I_F=20mA
Reverse Voltage	V_R	0.6	-	1.5	V	I_R=5mA
Luminous intensity* 1,3	I_V	2100	-	2700	mcd	I_F=20mA
Color Rendering Index*3	Ra	55	-	-	-	I_F=20mA
Half angle*2	$2\Theta_{1/2}$	-	120	-	deg	I_F=20mA

*1. The luminous intensity IV was measured at the peak of the spatial pattern which may not be aligned with the mechanical axis of the LED package.

*2. $2\Theta_{1/2}$ is the off-axis where the luminous intensity is 1/2 of the peak intensity.

*3. Measuring Tolerance

- V_F : ± 0.1 V, I_V : ± 10%, Ra : ± 3, X,Y : ± 0.01

7. Ranks

◆ I_V, V_F, Color Rank Table[*1]

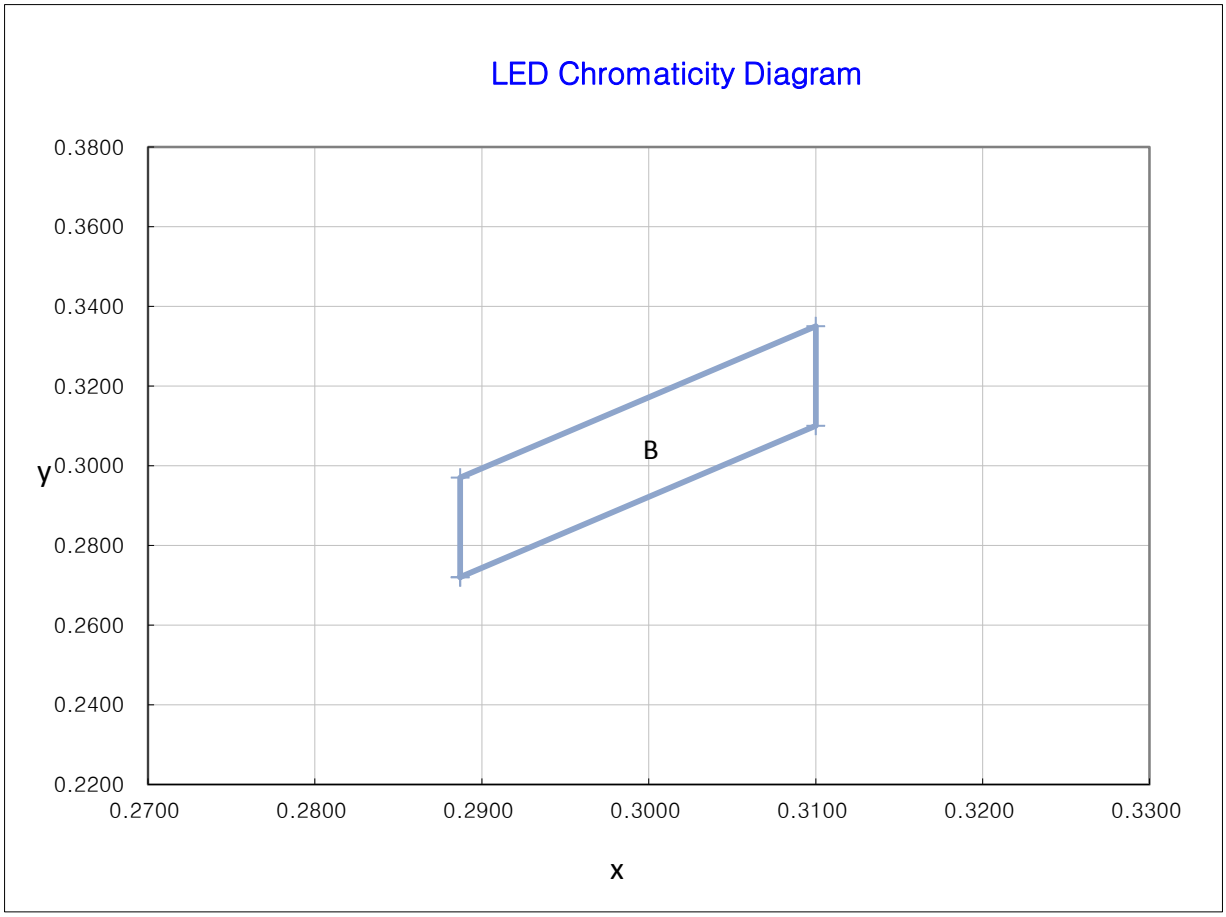
V_F, I_V, Color Rank @ IF = 20 mA		
Forward Voltage [V]	**Luminuous Intensity [mcd]**	**Chromaticity**
1 : 2.8 ~ 3.7	**R** : 2100 ~ 2200	**B**
	S : 2200 ~ 2300	
	T : 2300 ~ 2400	
	U : 2400 ~ 2500	
	V : 2500 ~ 2600	
	W : 2600 ~ 2700	

*1. KP3528W0AA2I marked as 1SB21(V_F, I_V, Color Rank) has the I_V range 2.2~2.3cd, VF rank 2.8~3.7V and Color range B area.

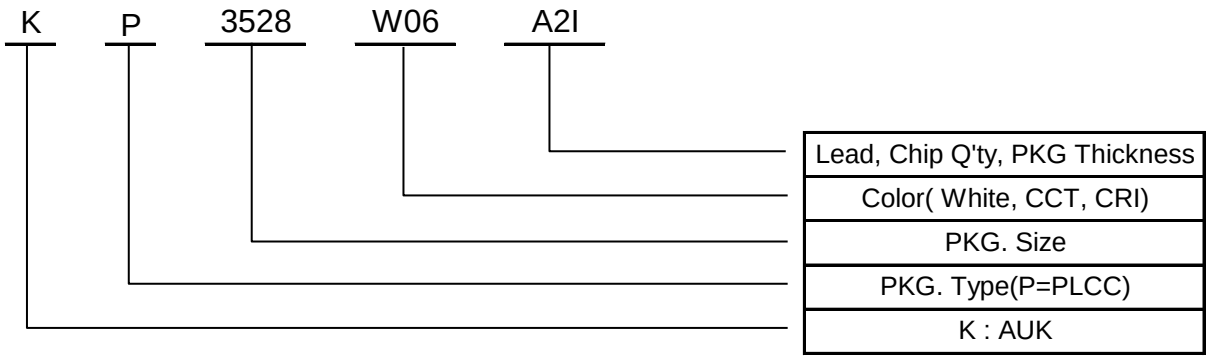
◆ Color Coordinate Rank

B21							
x	y						
0.2887	0.2720						
0.3100	0.3100						
0.3100	0.3350						
0.2887	0.2970						

◆ The CIE(x, y) Chromaticity Diagram

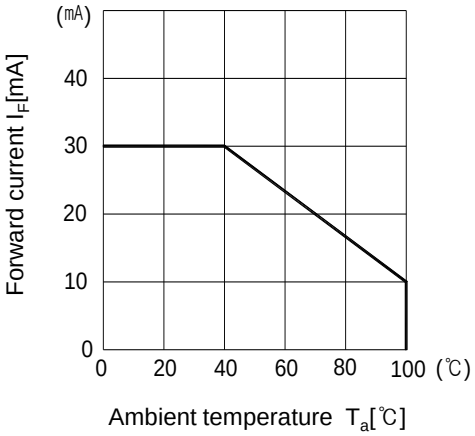


8. Part Numbering

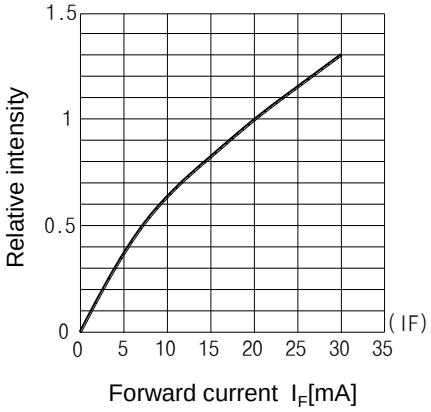


9. Characteristic Graphs

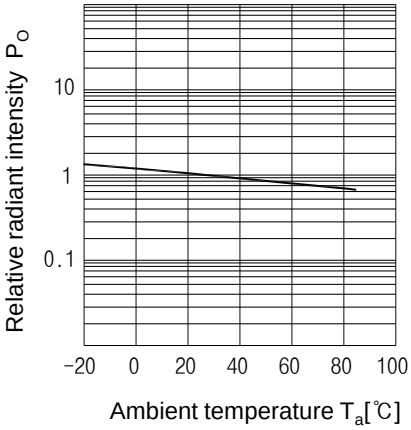
Forward current vs. Ambient temperature



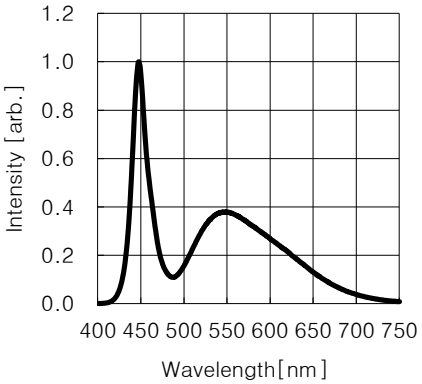
Luminous Intensity vs. Forward current



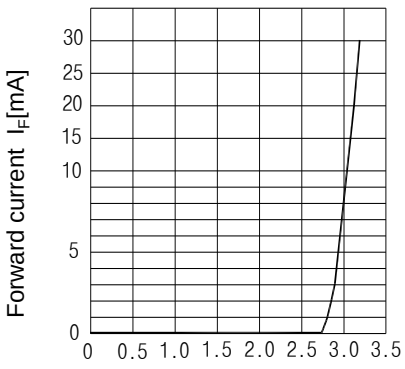
Relative luminous intensity vs. Ambient temperature



Relative intensity vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern