

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 phosphor.

2. Features

- ◆ Small Footprint Surface Mount Package (3.5 L × 2.8 W × 1.9 H [mm³])
- ◆ Typical Forward Voltage(V_F) : 3.2 V @ Forward Current(I_F)=20mA
- ◆ Operation Temperature from -40°C to +100°C
- ◆ Soldering methods : Reflow soldering
- ◆ JEDEC MSL level : 3
- ◆ Taping : 9mm conductive black carrier tape & antistatic clear cover tape

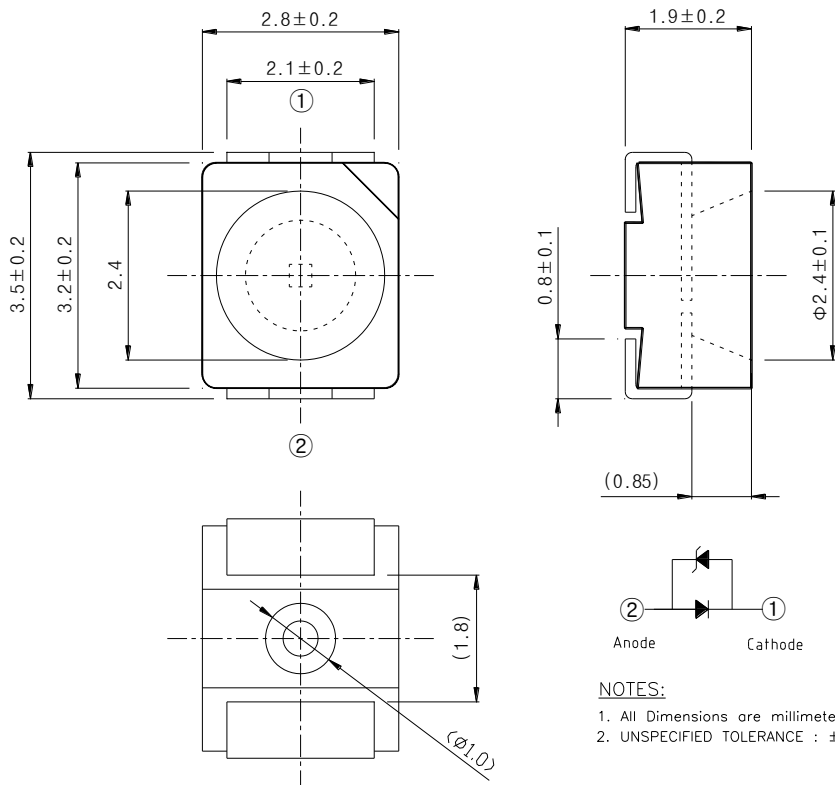
3. Applications

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

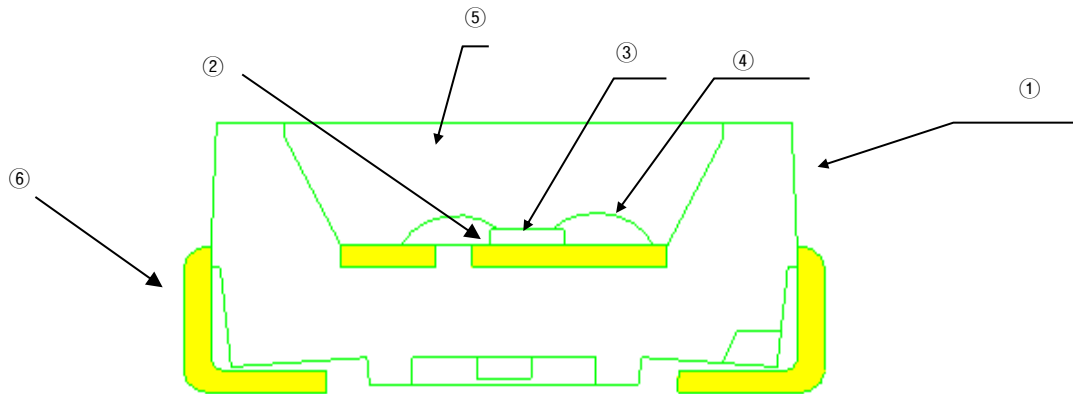
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When using this product, would you please refer to the latest specifications.

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

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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	°C	
Storage Temperature	T_S	-40	100	°C	
Soldering Temperature* ²	T_{sol}	-	260	°C	

*1. IFP was measured at $T_w \leq 1$ msec of pulse width and $D \leq 1/10$ of duty ratio.

*2. Soldering time : 5 Sec

6. Electro-Optical Characteristics ($T_A = 25^\circ\text{C}$)

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

*1. The luminous intensity I_V 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

- $V_F : \pm 0.1 \text{ V}$, $I_V : \pm 10\%$, Ra : ± 3 , X,Y : ± 0.01

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7. Ranks

◆ I_V , V_F , Color Rank Table^{*1}

V _F , I _V , Color Rank @ IF = 20 mA		
Forward Voltage [V]	Luminous 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	

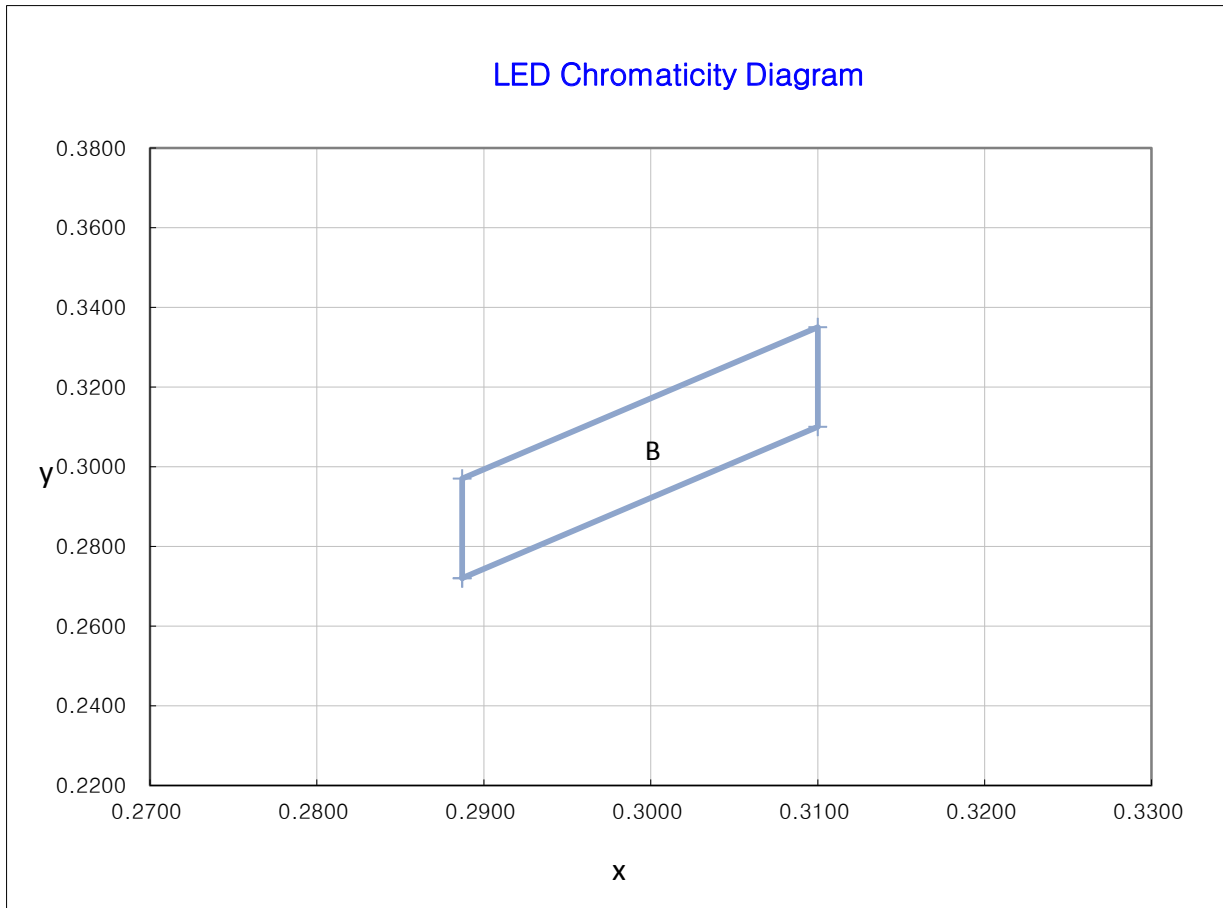
*1. KP3528W0AA2I marked as 1SB21(V_F, I_V, Color Rank) has the I_V range 2.2~2.3cd, V_F rank 2.8~3.7V and Color range B area.

◆ Color Coordinate Rank

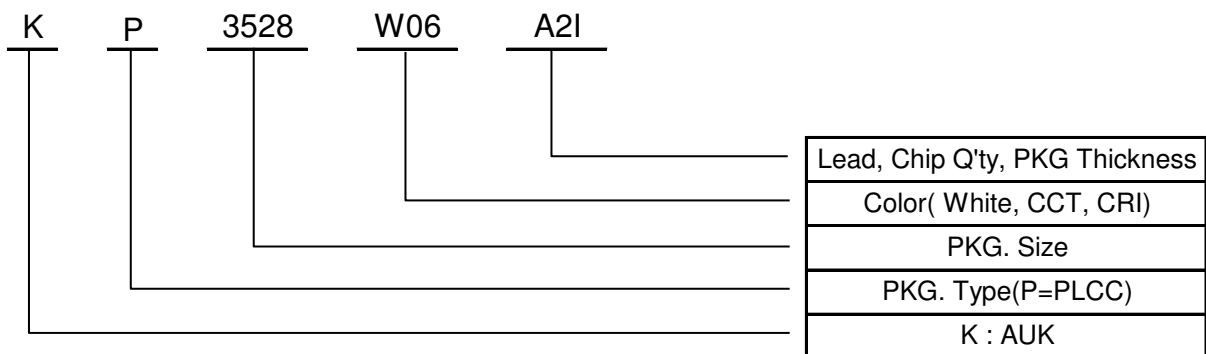
B21							
x	y						
0.2887	0.2720						
0.3100	0.3100						
0.3100	0.3350						
0.2887	0.2970						

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◆ The CIE(x, y) Chromaticity Diagram



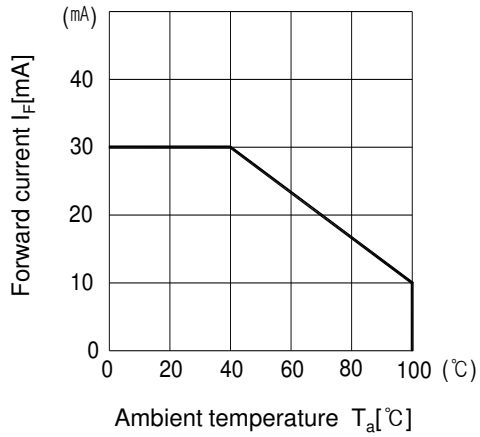
8. Part Numbering



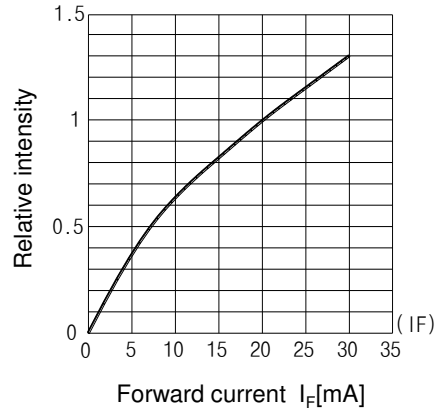
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9. Characteristic Graphs

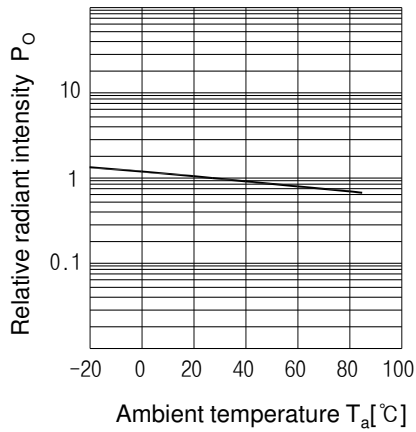
Forward current vs. Ambient temperature



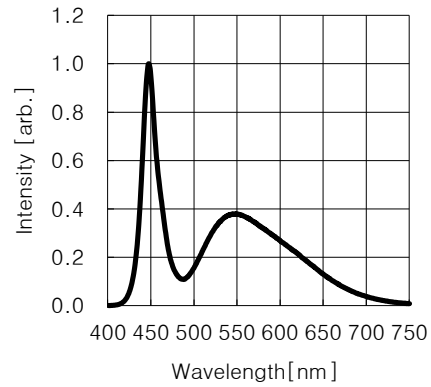
Luminous Intensity vs. Forward current



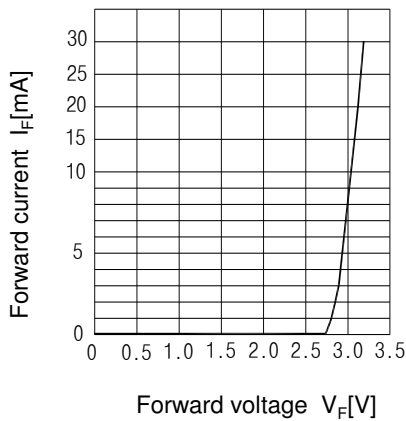
Relative luminous intensity vs. Ambient temperature



Relative intensity vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern

