1. Descriptions

The KP3528W8AT2I is a small and thin form plastic leaded chip carrier(PLCC) 4-pin package with InGaN blue Chip White LED.

2. Features

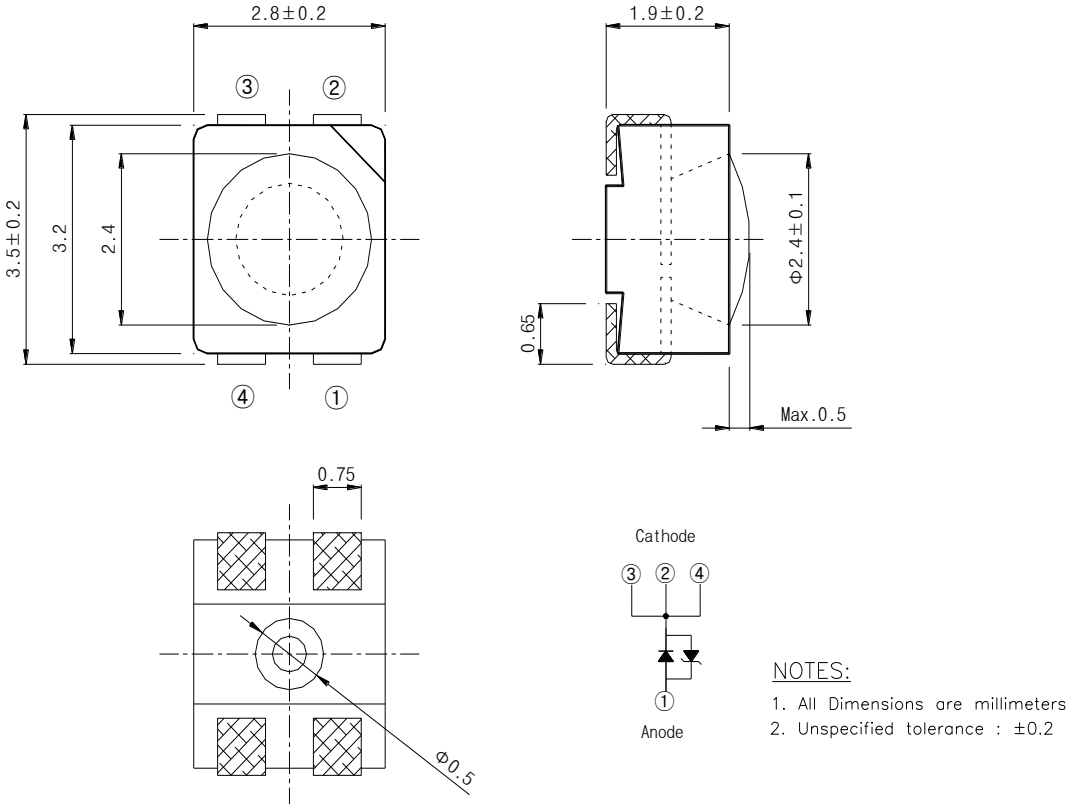
- Small Footprint Surface Mount Package (3.5 L × 2.8 W × 1.9 H [mm^3])
- Typical Forward Voltage(V_F) : 3.2 V @ Forward Current(I_F)=60mA
- Operation Temperature from -40℃ to +85℃
- Soldering methods : IR reflow soldering
- Taping : 8㎜ conductive black carrier tape & antistatic clear cover tape

3. Applications

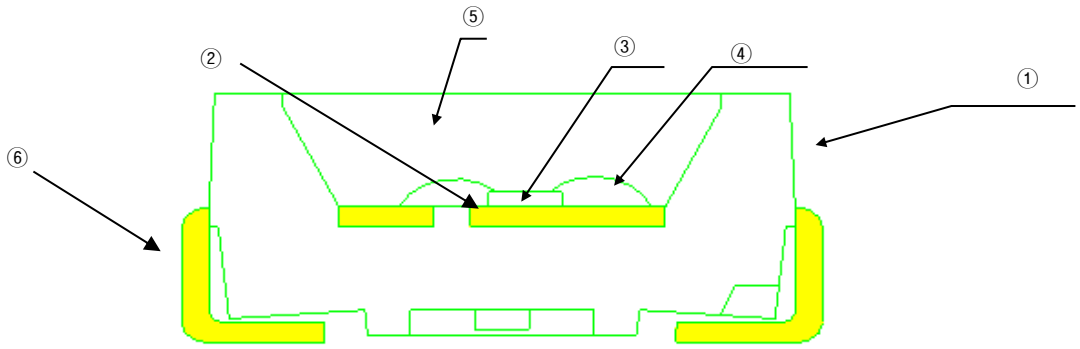
- Interior lighting
- General lighting
- Indoor and out door displays
- Architectural / Decorative lighting

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	Silicone + Phosphor
⑥	Lead	Fe Alloy

5. Absolute Maximums

Item	Symbol	Min.	Max.	Unit	Conditions
Forward Current	I_F	-	90	mA	
Peak Forward Current*1	I_{FP}	-	180	mA	
Power Dissipation	P_D	-	324	mW	
Reverse Voltage	V_R	-	5	V	
Operating Temperature	T_{OP}	-40	85	℃	
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	2.7	3.2	3.6	V	I_F=60mA
Reverse Voltage	V_R	0.6	-	1.5	V	I_F=5mA
Luminous intensity*1,3	I_V	5.5	-	7.0	cd	I_F=60mA
Color Rendering Index*3	Ra	75	-	-	-	I_F=60mA
Half angle*2	$2\Theta_{1/2}$	-	120	-	deg	I_F=60mA

*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 : ± 0.05 V, I_V : ± 10%, Ra : ± 3, X,Y : ± 0.01

7. Ranks

◆ IV, V_F, Color Rank @ I_F = 60 mA

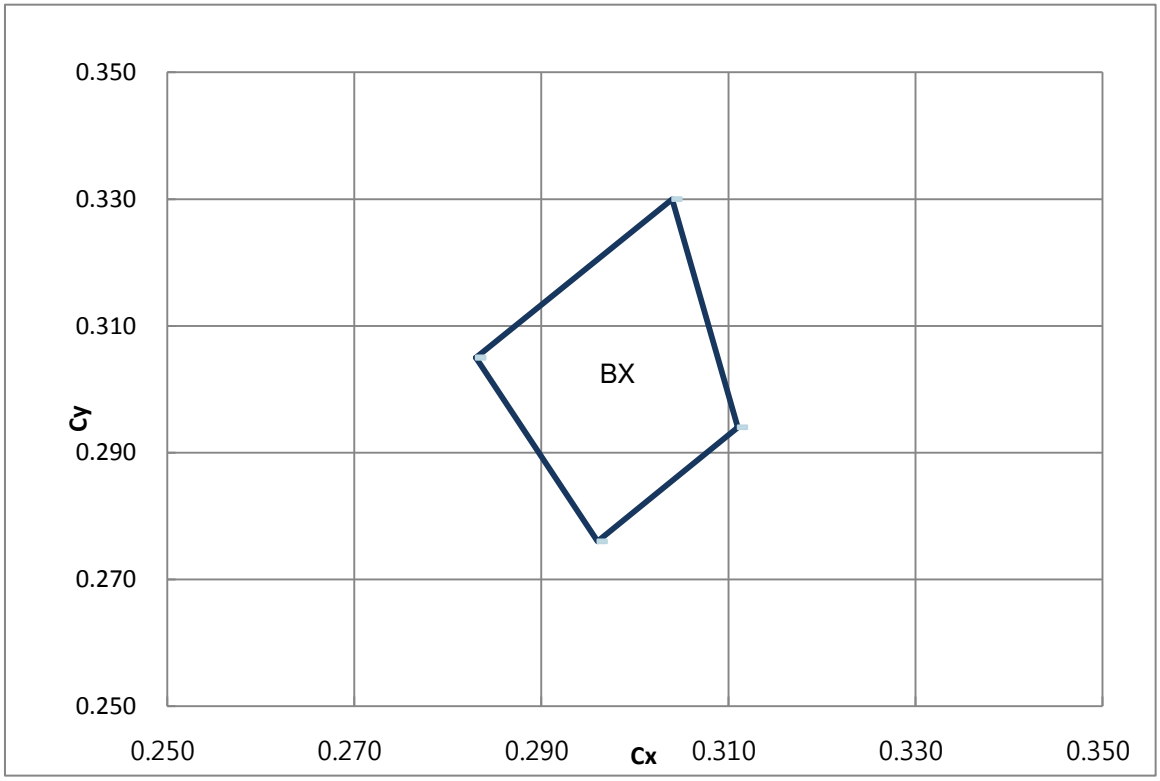
Forward Voltage [V]	Luminuous Intensity [cd]	Chromaticity
1 : 2.7 ~2.9	**P** : 5.5 ~ 6.0	**BX**
2 : 2.9 ~ 3.0	**Q** : 6.0 ~ 6.5	
3 : 3.0 ~ 3.1	**R** : 6.5 ~ 7.0	
4 : 3.1 ~ 3.2		
5 : 3.2 ~ 3.3		
6 : 3.3 ~ 3.4		
7 : 3.4 ~ 3.6		

*1. KP3528W8AT2I marked as 2QBX(IV, VF, Color Rank) has the IV range6.0~6.5cd, VF rank 2.9~3.0V and Color range BX area.

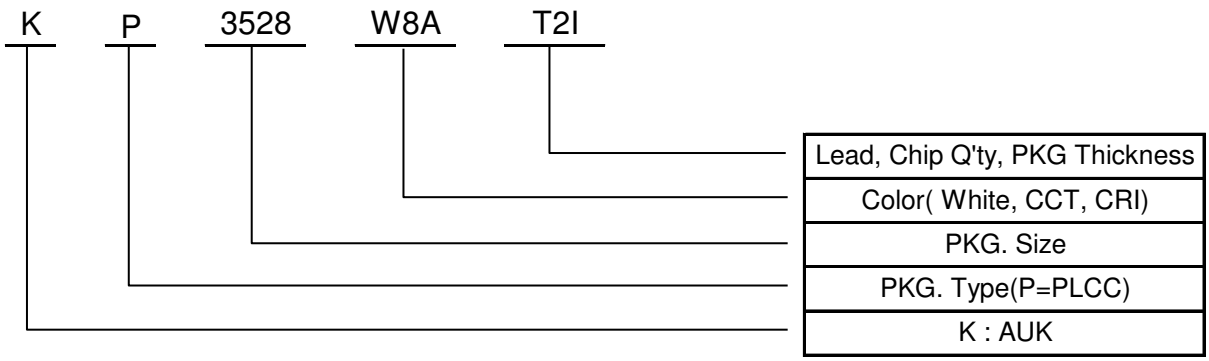
◆ Color Coordinate Rank

BX							
x	y						
0.2830	0.3050						
0.2960	0.2760						
0.3110	0.2940						
0.3040	0.3300						

◆ The CIE(x, y) Chromaticity Diagram

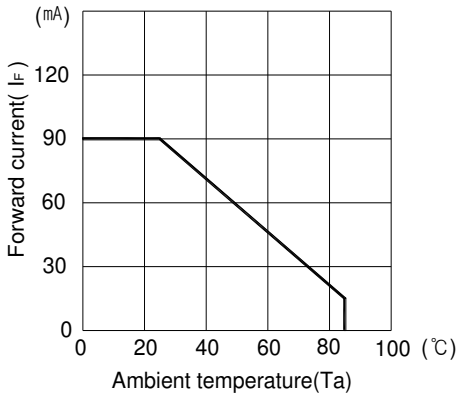


8. Part Numbering

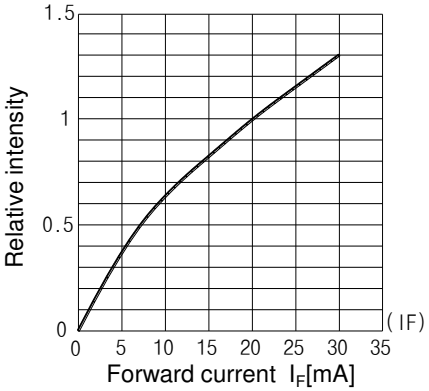


9. Characteristic Graphs

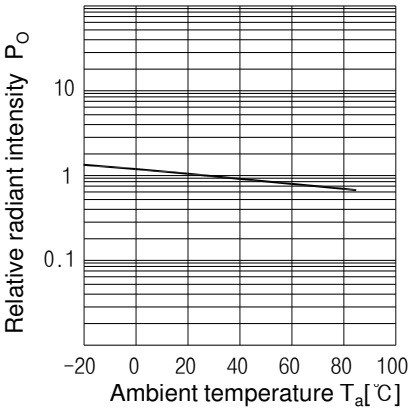
Forward current vs. Ambient temperature



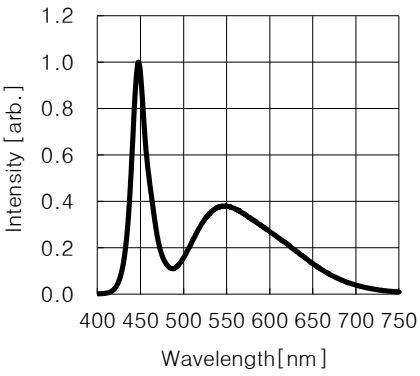
Radiant Intensity vs. Forward current



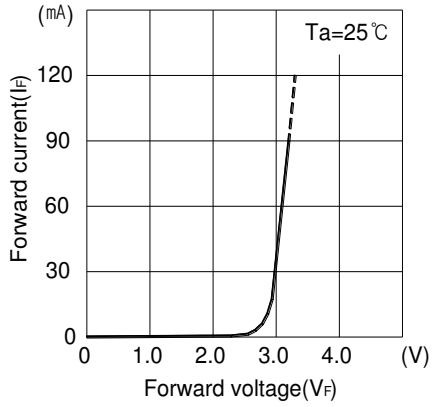
Relative radiant intensity vs. Ambient temperature



Relative intensity vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern