1. Descriptions

The KP3528W8AC6I is a White LED consisting of small and thin form plastic leaded chip carrier (PLCC) 4-pin package, InGaN blue chip and phosphor.

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

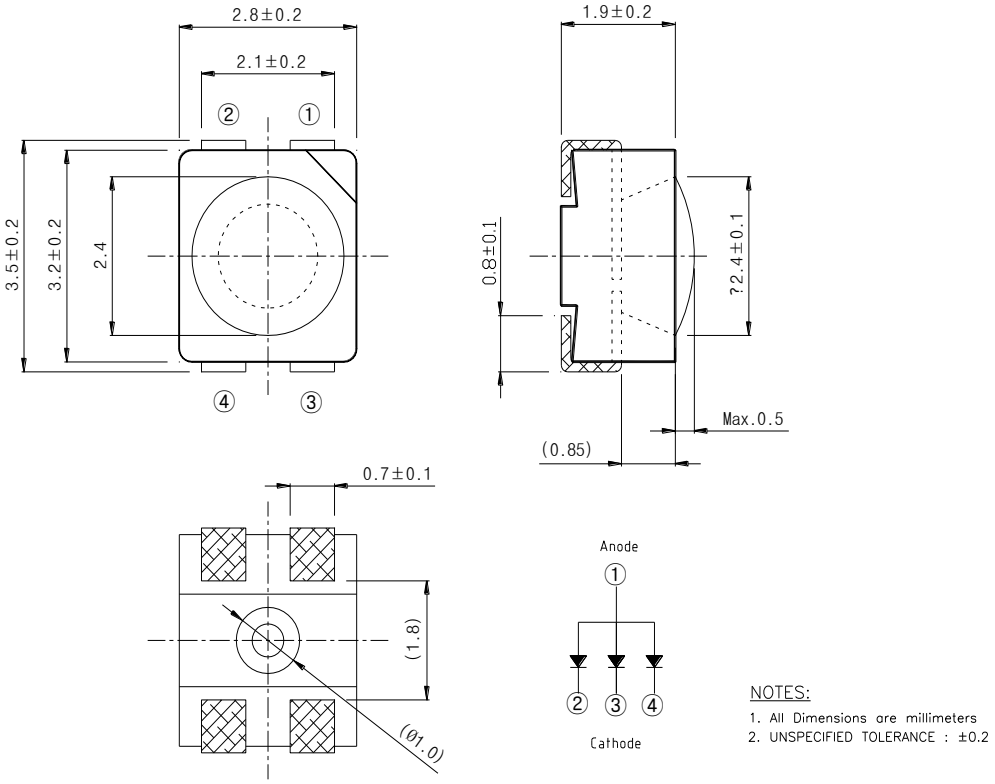
3. Applications

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

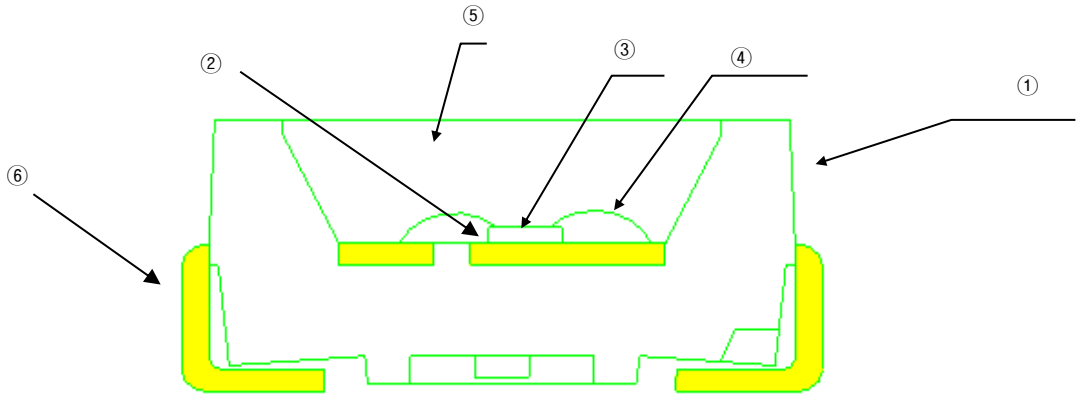
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

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	Silicone + Phosphor
⑥	Lead	Fe Alloy

The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

5. Absolute Maximums

Item	Symbol	Min.	Max.	Unit	Conditions
Forward Current	I_F	-	90	mA	
Peak Forward Current*1	I_{FP}	-	100	mA	per die
Power Dissipation	P_D	-	324	mW	
Reverse Voltage	V_R	-	5	V	per die
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	2.8	3.2	3.7	V	I_F=20mA(per die)
Reverse current	I_R	-	-	10	μA	V_R=5V(per die)
Luminous intensity*1,3	I_V	5.0	6.0	8.0	cd	I_F=60mA
Color Temp.	CCT	-	10000	-	K	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 : ± 0.1 V, I_V : ± 10%, Ra : ± 3, X,Y : ± 0.01

7. Ranks

◆ IV, V_F, Color Rank @ I_F = 60 mA

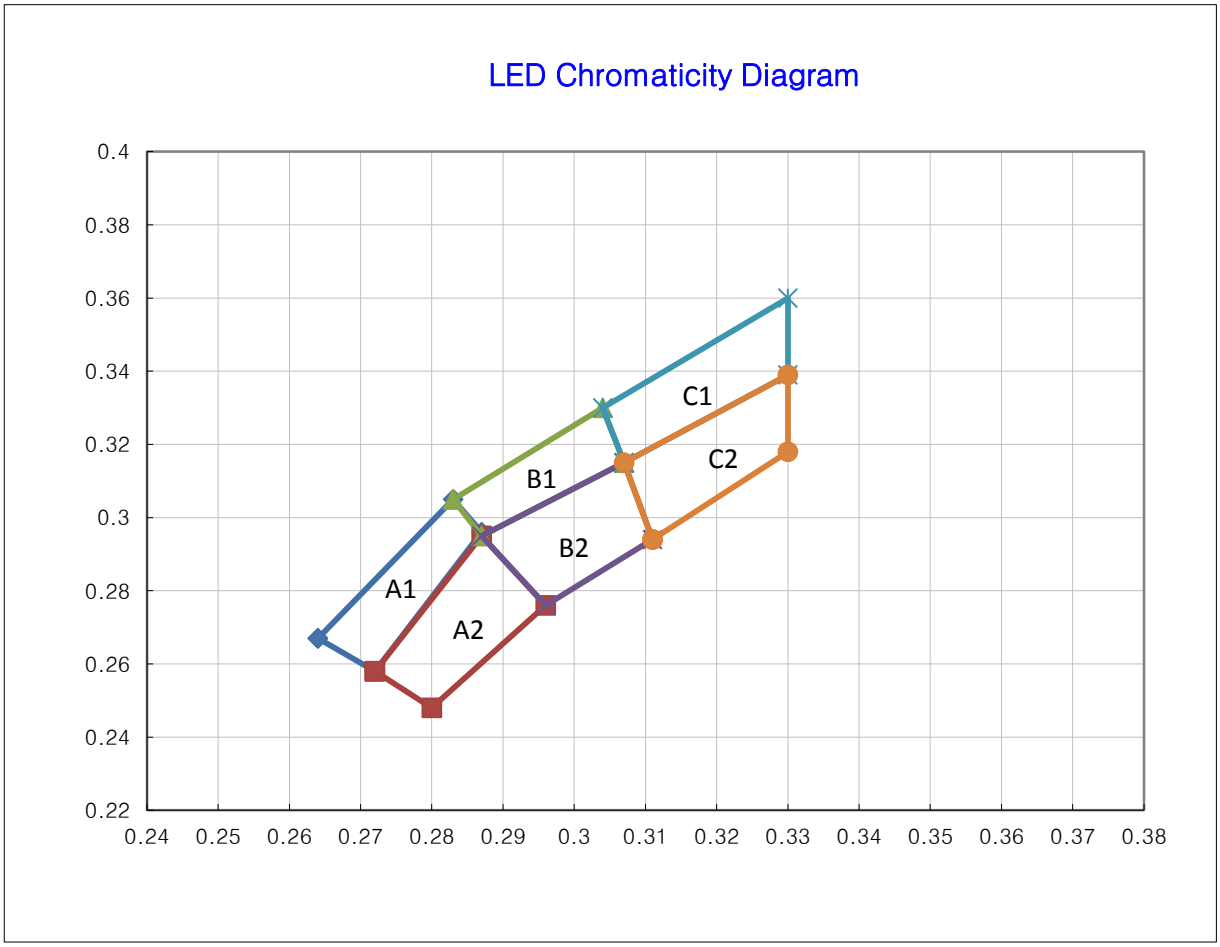
Luminous Intensity Range[mcd]			
Luminuous Intensity [cd]	**Forward Voltage [V]**	**Chromaticity**	
P : 5.0 ~ 6.0	**1** : 2.8 ~3.0	**A1**	**A2**
Q : 6.0 ~ 7.0	**2** : 3.0 ~ 3.1	**B1**	**B2**
R : 7.0 ~ 8.0	**3** : 3.1 ~ 3.2	**C1**	**C2**
	4 : 3.2 ~ 3.3		
	5 : 3.3 ~ 3.4		
	6 : 3.4 ~ 3.5		
	7 : 3.5 ~ 3.7		

◆ Color Coordinate Rank

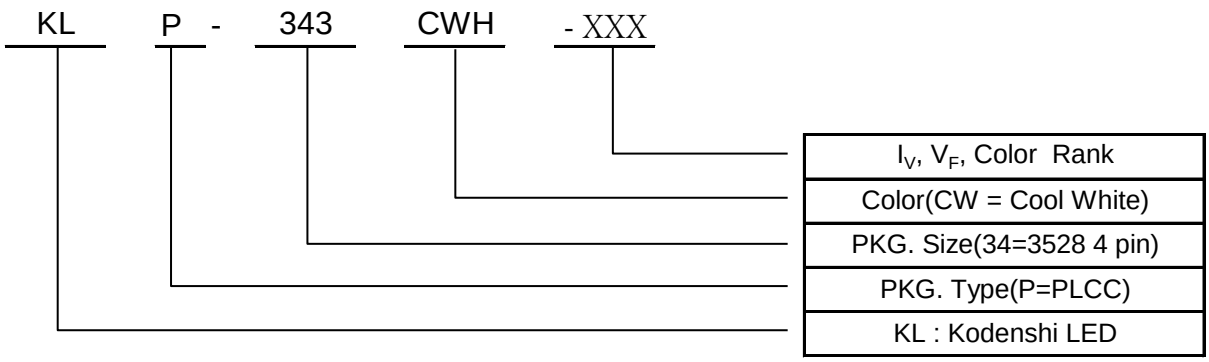
A1		**A2**		**B1**		**B2**	
x	y	x	y	x	y	x	y
0.264	0.267	0.272	0.258	0.283	0.305	0.296	0.276
0.272	0.258	0.280	0.248	0.287	0.295	0.311	0.294
0.287	0.296	0.296	0.276	0.307	0.315	0.307	0.315
0.283	0.305	0.287	0.295	0.304	0.330	0.287	0.295
C1		**C2**					
x	y	x	y				
0.307	0.315	0.311	0.294				
0.330	0.339	0.330	0.318				
0.330	0.360	0.330	0.339				
0.304	0.330	0.307	0.315				

The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

◆ The CIE(x, y) Chromaticity Diagram



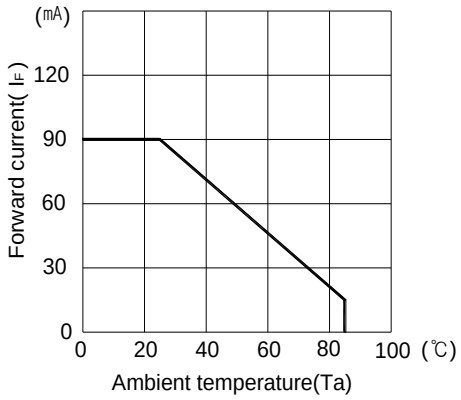
8. Part Numbering



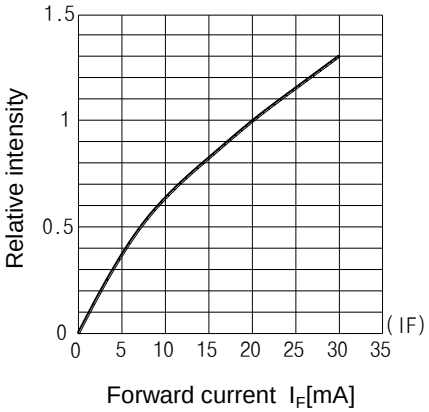
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

9. Characteristic Graphs

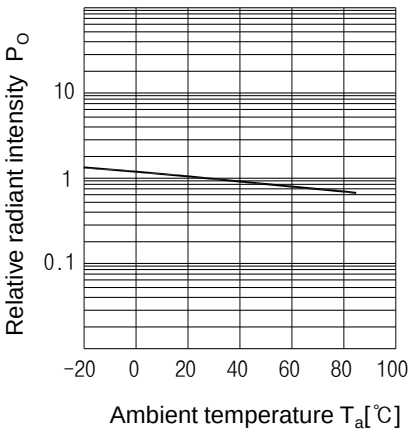
Forward current vs. Ambient temperature



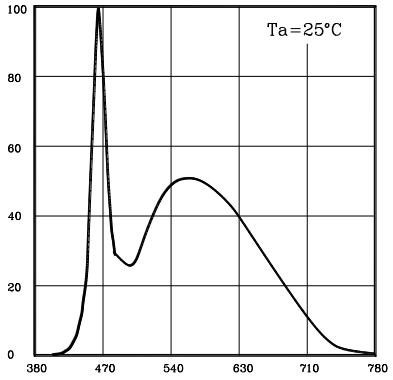
Radiant Intensity vs. Forward current



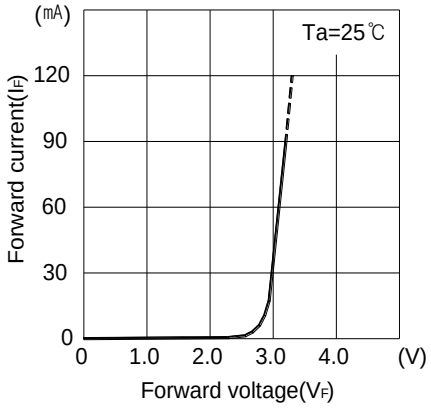
Relative radiant intensity vs. Ambient temperature



Relative intensity vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern