

## 1. Descriptions

The KP3528BSKA2I-JX is a Skyblue 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 [mm<sup>3</sup>])
- ◆ Typical Forward Voltage(V<sub>F</sub>) : 3.2 V @ Forward Current(I<sub>F</sub>)=20mA
- ◆ Operation Temperature from -40°C to +100°C
- ◆ Soldering methods : IR reflow soldering
- ◆ Taping : 8mm conductive black carrier tape & antistatic clear cover tape

## 3. Applications

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

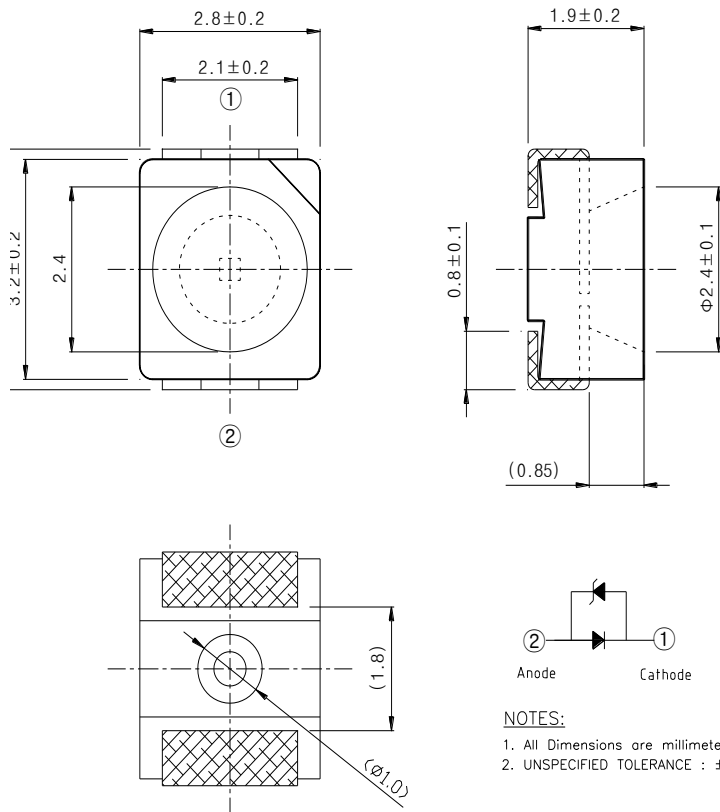
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When using this product, would you please refer to the latest specifications.

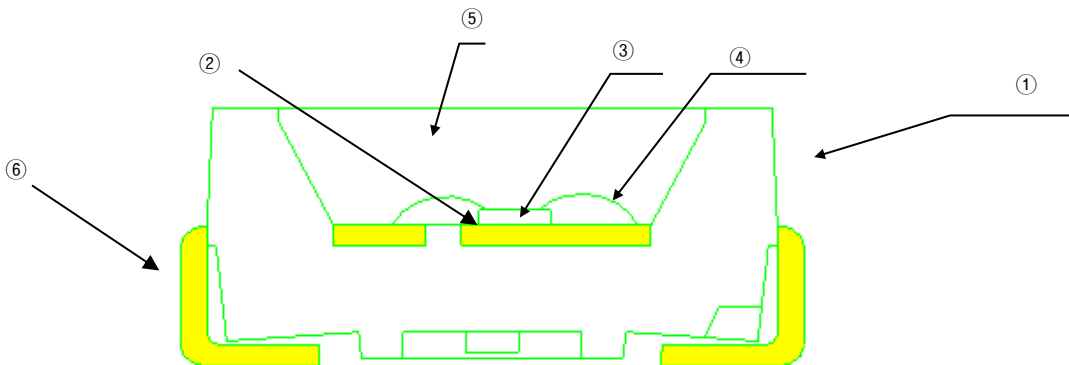
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**4. Outline Dimensions and Material Descriptions**

◆ Outline Dimensions



◆ Material Descriptions



No.	Item	Material
①	Package	PPA
②	Die Adhesive	Clear Silicone
③	LED Chip	InGaN
④	Wire	Au
⑤	Encapsulant	Clear Silicone + Phosphor
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 <sup>*1</sup>	$I_{FP}$	-	90	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 <sup>*2</sup>	$T_{sol}$	-	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 <sup>*3</sup>	$V_F$	2.7	3.2	3.8	V	$I_F=10\text{mA}$
Reverse voltage	$V_R$	0.5	-	1.5	V	$I_R=5\text{mA}$
Luminous intensity <sup>*1,3</sup>	$I_V$	80	140	200	mcd	$I_F=10\text{mA}$
Chromaticity coordiante <sup>*3</sup>	x	0.151	-	0.158	-	$I_F=10\text{mA}$
	y	0.065	-	0.085	-	$I_F=10\text{mA}$
Half angle <sup>*2</sup>	$2\theta_{1/2}$	-	120	-	deg	$I_F=10\text{mA}$

\*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

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

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**7. Ranks**

◆  $I_V$ ,  $V_F$ , Color Rank Table\*1

$V_F$ , $I_V$ , Color Rank @ IF = 10 mA		
Forward Voltage [V]	Luminuous Intensity [mcd]	Chromaticity
1 : 2.7 ~ 3.1	P : 80 ~ 110	J1
2 : 3.1 ~ 3.8	Q : 110 ~ 150	J2
-	R : 140 ~ 180	J3
-	S : 170 ~ 200	J4

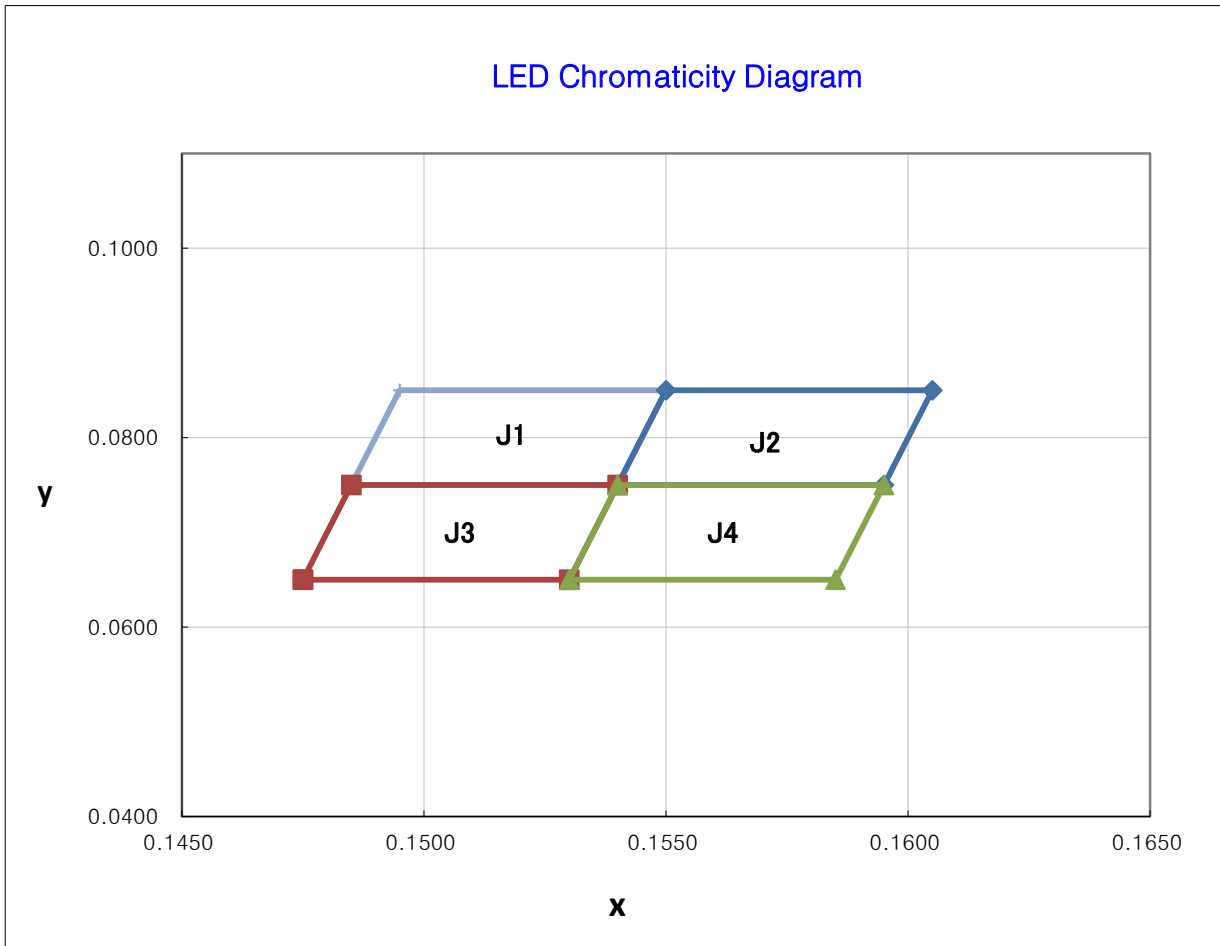
\*1. KP3528BSKA2I-JX marked as 2QJ1( $V_F$ ,  $I_V$ , Color Rank) has the  $I_V$  range 110~140mcd, VF rank 3.1~3.8V and Color range J1 area.

◆ Color Coordinate Rank

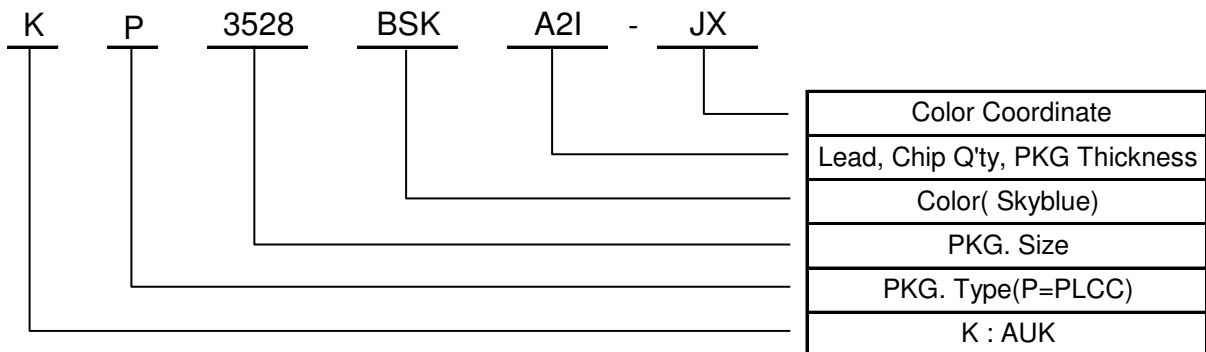
J1		J2		J3		J4	
x	y	x	y	x	y	x	y
0.1485	0.0750	0.1540	0.0750	0.1475	0.0650	0.1530	0.0650
0.1540	0.0750	0.1595	0.0750	0.1530	0.0650	0.1585	0.0650
0.1550	0.0850	0.1605	0.0850	0.1540	0.0750	0.1595	0.0750
0.1495	0.0850	0.1550	0.0850	0.1485	0.0750	0.1540	0.0750

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◆ The CIE(x, y) Chromaticity Diagram



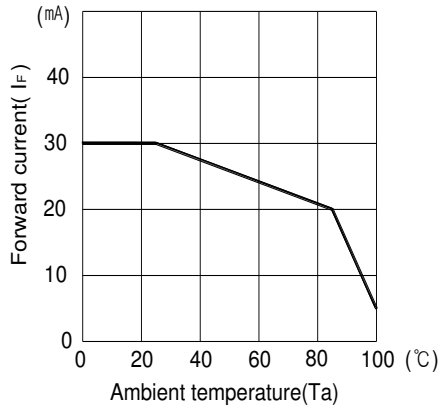
**8. Part Numbering**



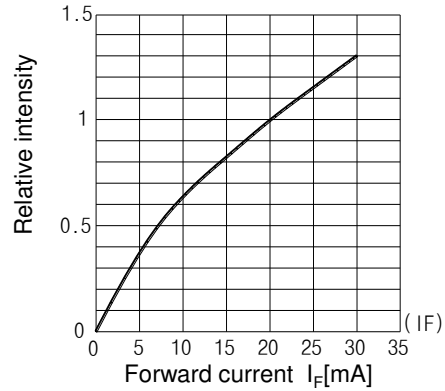
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**9. Characteristic Graphs**

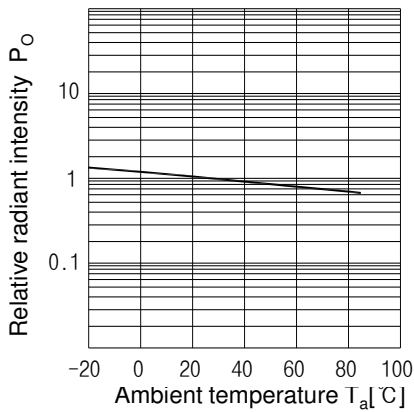
**Forward current vs. Ambient temperature**



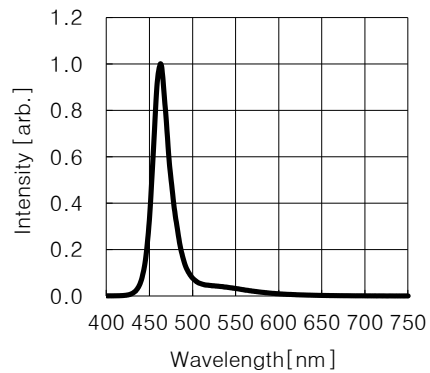
**Luminous Intensity vs. Forward current**



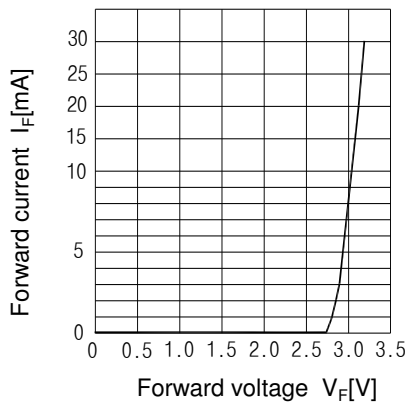
**Relative luminous intensity vs. Ambient temperature**



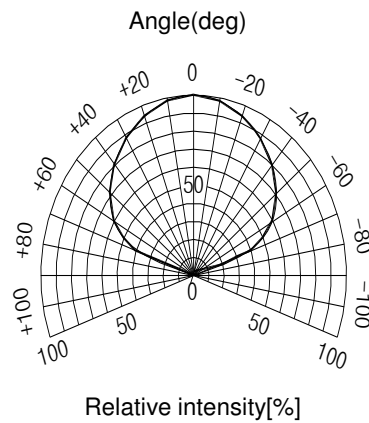
**Relative intensity vs. Wavelength**



**Forward current vs. Forward voltage**



**Radiant Pattern**



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