## 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 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 : IR reflow soldering
- Taping : 8㎜ conductive black carrier tape & antistatic clear cover tape

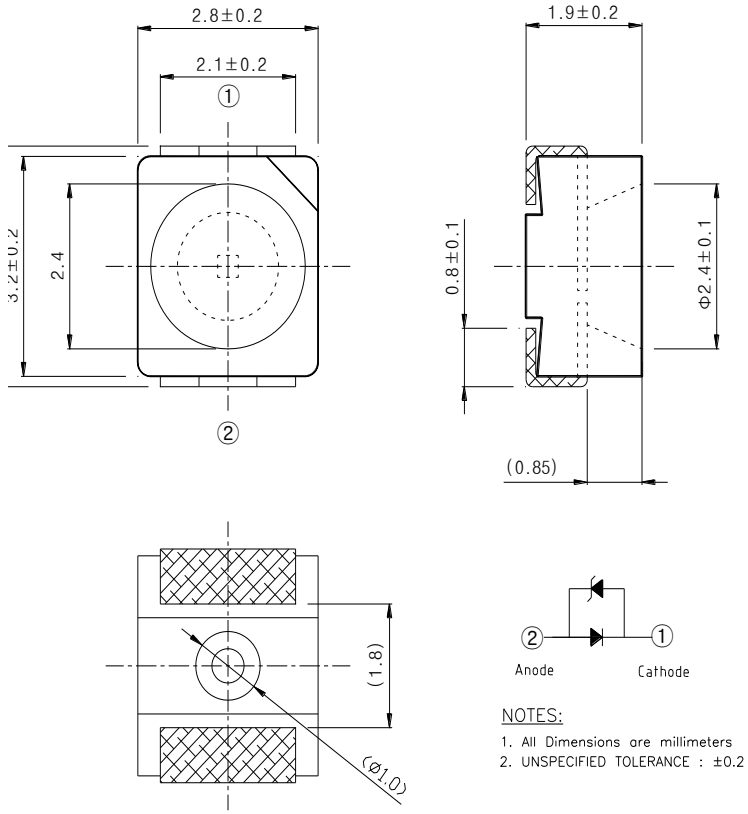
## 3. Applications

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

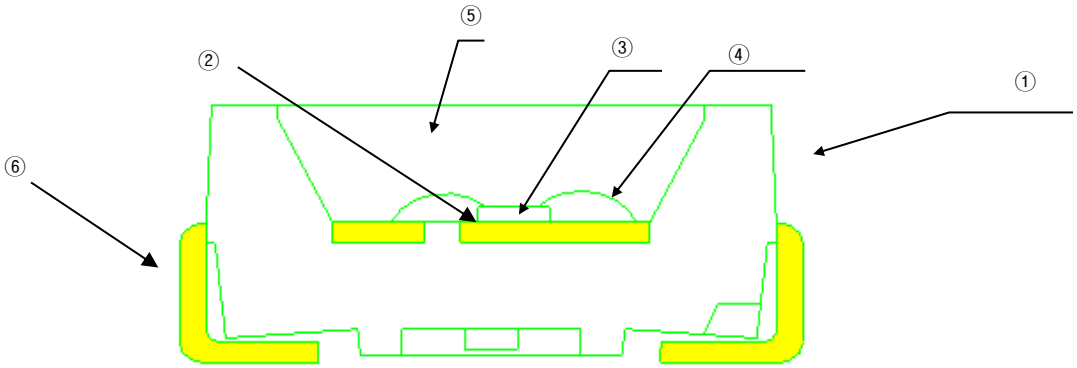
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When using this product, would you please refer to the latest specifications.

## 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 | $I_{FP}$ | - | 90 | 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 | $V_F$ | 2.7 | 3.2 | 3.8 | V | $I_F$=10mA |
| Reverse voltage | $V_R$ | 0.5 | - | 1.5 | V | $I_R$=5mA |
| Luminous intensity*1,3 | $I_V$ | 80 | 140 | 200 | mcd | $I_F$=10mA |
| Chromaticity coordiante*3 | x | 0.151 | - | 0.158 | - | $I_F$=10mA |
| | y | 0.065 | - | 0.085 | - | $I_F$=10mA |
| Half angle*2 | $2\Theta_{1/2}$ | - | 120 | - | deg | $I_F$=10mA |

*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 = 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** |

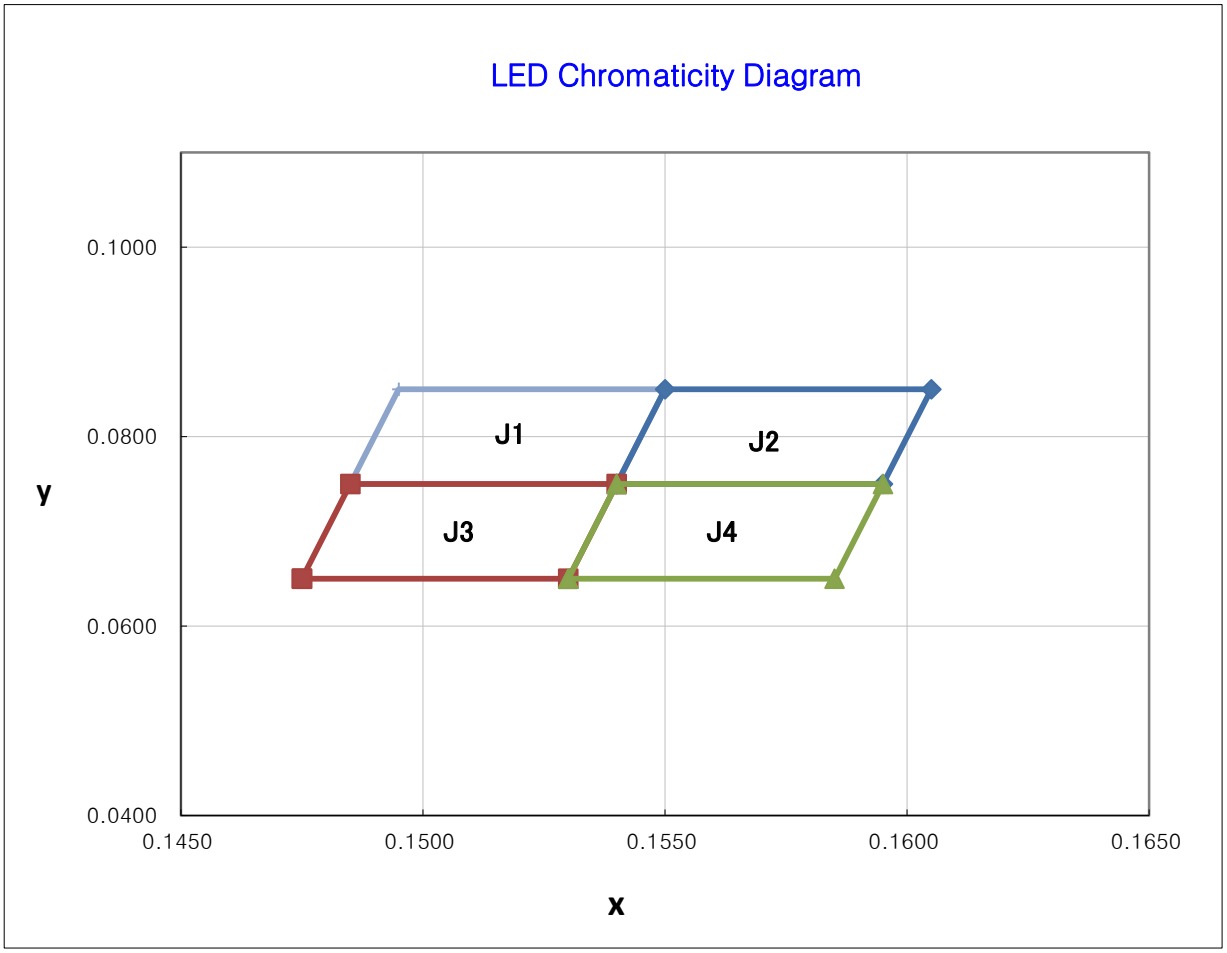
*1. KP3528BSKA2I-JX marked as 2QJ1($V_F$, $I_V$, Color Rank) has the $I_V$ range 110~140mcd, VF rank 3.1~3.8V and Color range J1 area.

◆ Color Coordinate Rank

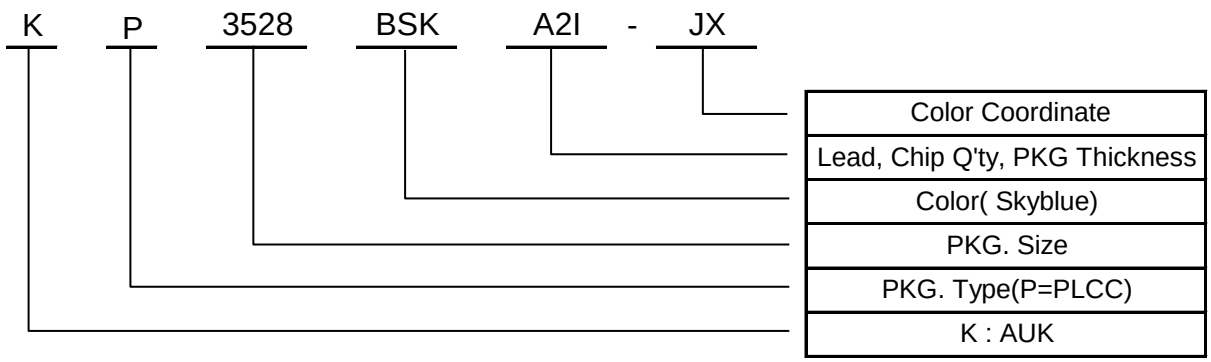
| J1 | | J2 | | J3 | | J4 | |
|---|---|---|---|---|---|---|---|
| x | y | x | y | x | y | x | y |
| 0.1485 | 0.0750 | 0.1540 | 0.0750 | 0.1475 | 0.0650 | 0.1530 | 0.0650 |
| 0.1540 | 0.0750 | 0.1595 | 0.0750 | 0.1530 | 0.0650 | 0.1585 | 0.0650 |
| 0.1550 | 0.0850 | 0.1605 | 0.0850 | 0.1540 | 0.0750 |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

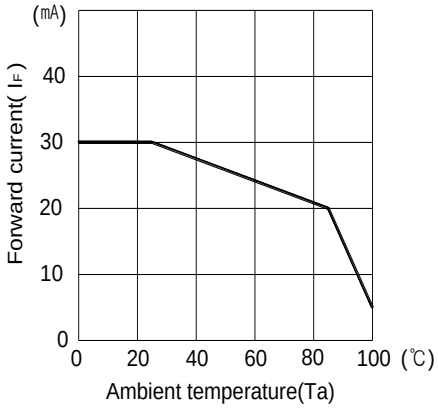



**8. Part Numbering**

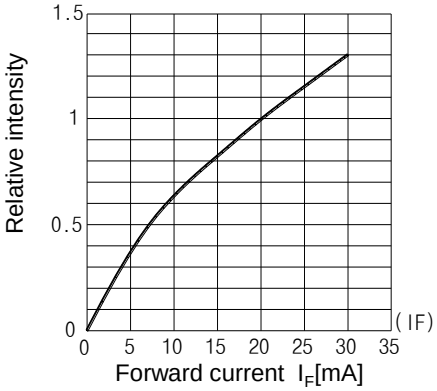


**9. Characteristic Graphs**

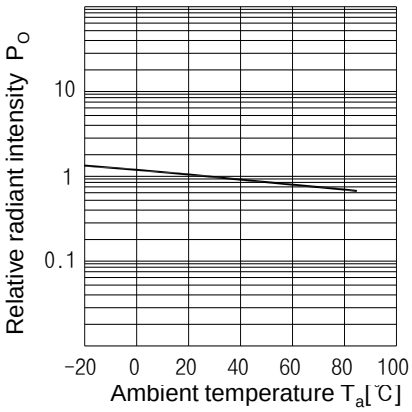
**Forward current vs. Ambient temperature**



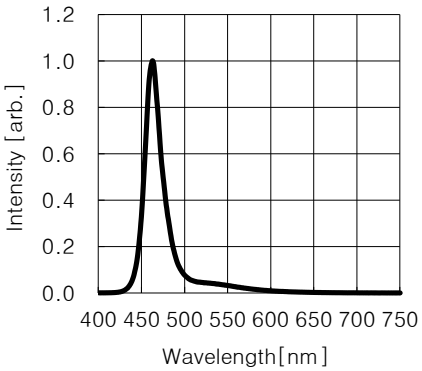

**Luminous Intensity vs. Forward current**



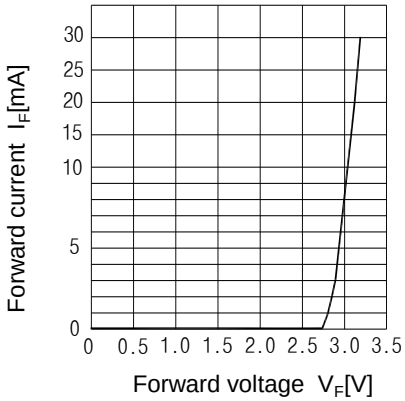

**Relative luminous intensity vs. Ambient temperature**



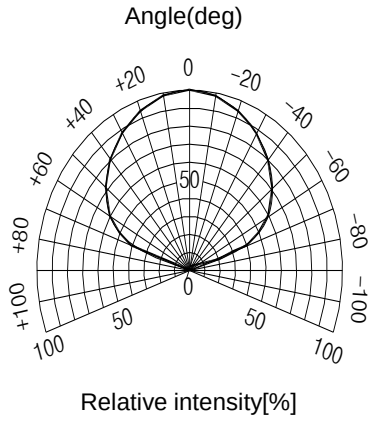

**Relative intensity vs. Wavelength**




**Forward current vs. Forward voltage**




**Radiant Pattern**




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