## 1. Descriptions

The KP3528BSKA2I-GB is a Skyblue LED consisting of small and thin plastic leaded chip carrier (PLCC) 2-pin package, InGaN blue chip and phoshpr.

## 2. Features

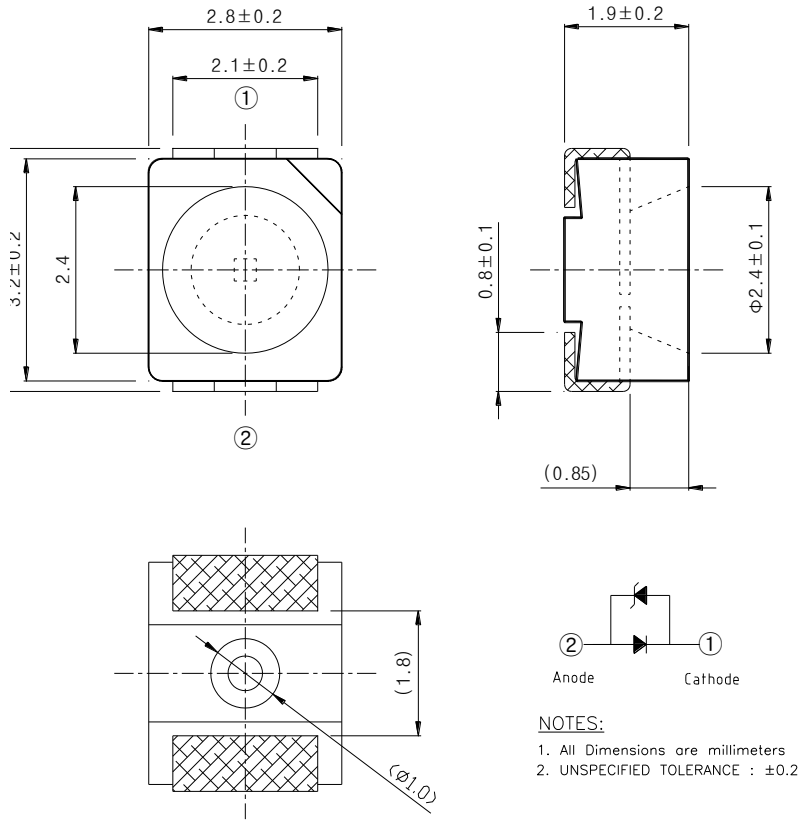
- Small Footprint Surface Mount Package ( 3.5 L × 2.8 W × 1.9 H [$mm^3$])
- Typical Forward Voltage($V_F$) : 2.9 V @ Forward Current($I_F$)=10mA
- Operation Temperature from -40℃ to +100℃
- Soldering methods : IR reflow soldering
- Taping : 8㎜ conductive black carrier tape & antistatic clear cover tape

## 3. Applications

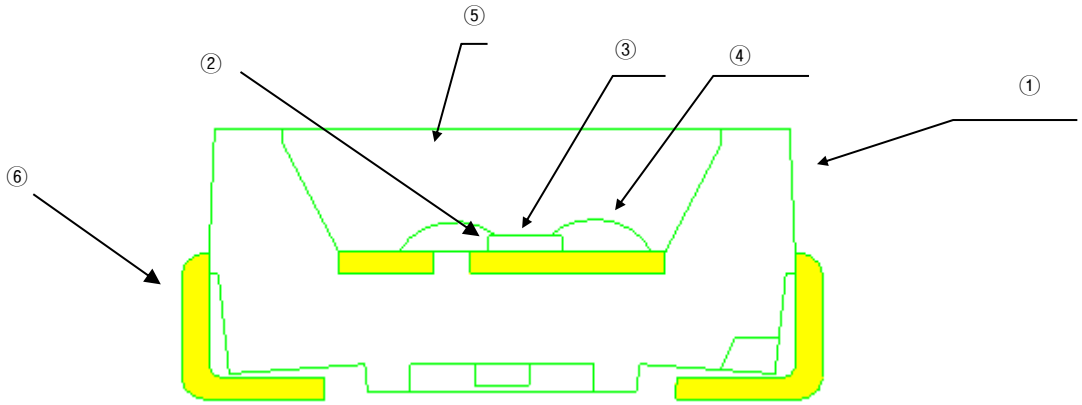
- Interior lighting
- General lighting
- Indoor and out door displays
- Architectural / Decorative lighting

## 4. Outline Dimensions and Material Descriptions

◆ Outline Dimensions




◆ Material Descriptions




| No. | Item | Material |
|---|---|---|
| ① | Package | PA |
| ② | Die Adhesive | Clear Sillicone |
| ③ | LED Chip | InGaN |
| ④ | Wire | Au |
| ⑤ | Encapsulant | Clear Sillicone + Phsphor |
| ⑥ | Lead | Cu Alloy |

**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. Reflow soldering time : Max. 10 Sec

**6. Electro-Optical Characteristics ($T_A$ = 25℃)**

| Item | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---|---|---|---|---|---|---|
| Forward voltage*3 | $V_F$ | 2.6 | 2.8 | 3.5 | V | $I_F$=10mA |
| Reverse voltage | $V_R$ | 0.6 | - | 1.6 | V | $I_R$=5mA |
| Luminous intensity* | $I_V$ | 150 | 250 | 350 | mcd | $I_F$=10mA |
| Chromaticity coordiante*3 | x | 0.1420 | - | 0.1580 | - | $I_F$=10mA |
| | y | 0.0580 | - | 0.0730 | - | $I_F$=10mA |
| Peak wavelength | $W_P$ | 452.5 | 455 | 460 | nm | $I_F$=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

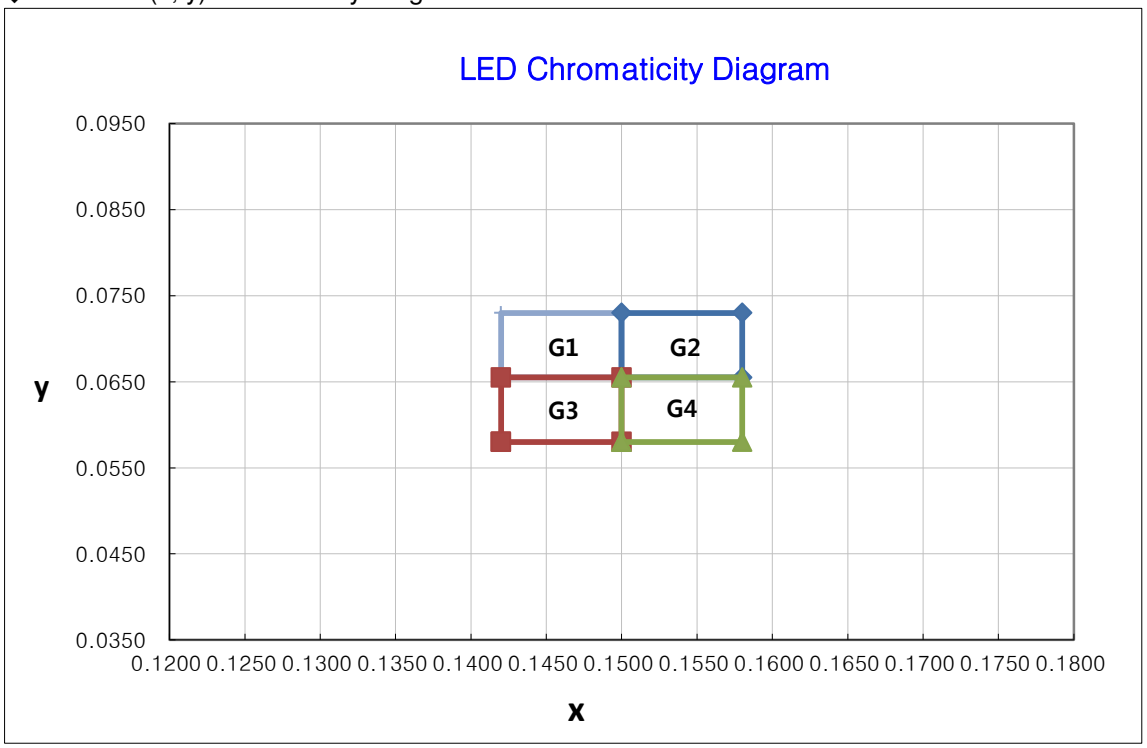
| **$V_F$, $I_V$, Color Rank @ $I_F$ = 10 mA** | | |
|---|---|---|
| **Forward Voltage [V]** | **Luminuous Intensity [mcd]** | **Chromaticity** |
| **1** : 2.6 ~ 3.0 | **P** : 150 ~ 200 | **G1** |
| **2** : 3.0 ~ 3.5 | **Q** : 200 ~ 250 | **G2** |
| - | **R** : 250 ~ 300 | **G3** |
| - | **S** : 300 ~ 350 | **G4** |

*1. KP3528BSKA2I-GB marked as 1PG1($V_F$, $I_V$, Color Rank) has the $I_V$ range 150~200mcd, VF rank 2.6~3.0V and Color range G1 area.

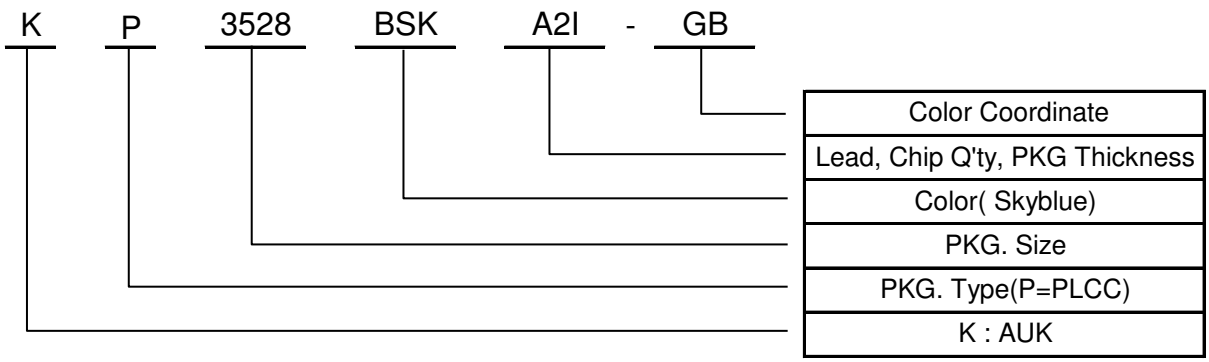
◆ Color Coordinate Rank

| G1 | | G2 | | G3 | | G4 | |
|---|---|---|---|---|---|---|---|
| x | y | x | y | x | y | x | y |
| 0.1420 | 0.0655 | 0.1500 | 0.0655 | 0.1420 | 0.0580 | 0.1500 | 0.0580 |
| 0.1500 | 0.0655 | 0.1580 | 0.0655 | 0.1500 | 0.0580 | 0.1580 | 0.0580 |
| 0.1500 | 0.0730 | 0.1580 | 0.0730 | 0.1500 | 0.0655 | 0.1580 | 0.0655 |
| 0.1420 | 0.0730 | 0.1500 | 0.0730 | 0.1420 | 0.0655 | 0.1500 | 0.0655 |
| 0.1420 | 0.0655 | 0.1500 | 0.0655 | 0.1420 | 0.0580 | 0.1500 | 0.0580 |

◆ The CIE(x, y) Chromaticity Diagram

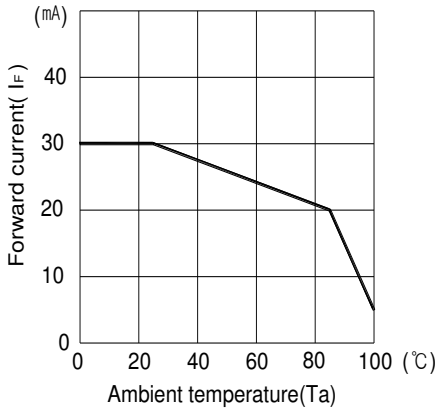



**8. Part Numbering**

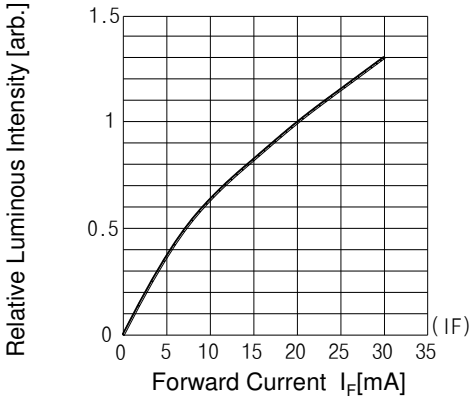


**9. Characteristic Graphs**

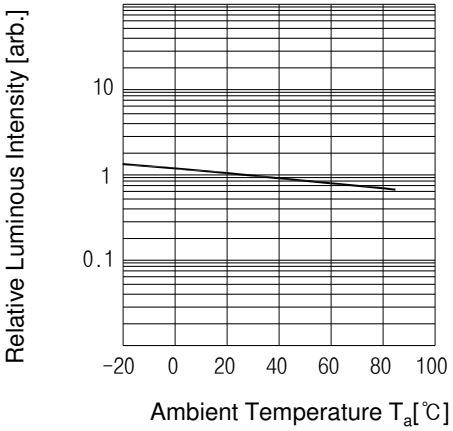
**Forward Current vs. Ambient Temperature**



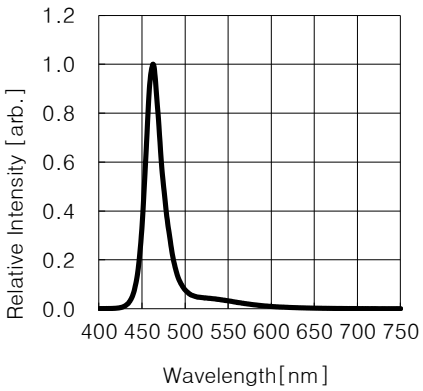

**Relative Luminous Intensity vs. Forward Current**



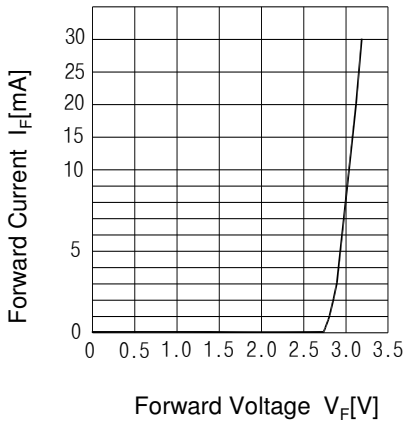

**Relative Luminous Intensity vs. Ambient Temperature**



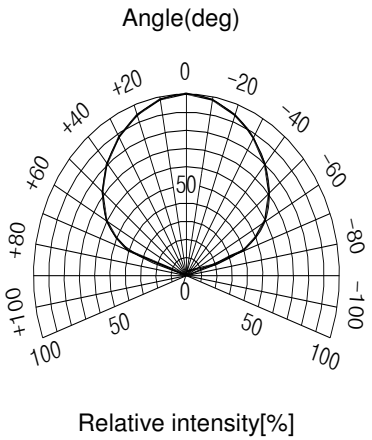

**Relative Intensity vs. Wavelength**




**Forward Current vs. Forward Voltage**




**Radiant Pattern**




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.