

### 1. Descriptions

The KB1608G52 (KLB-16G) is a ultra small and thin form package white LED and it's ideal for cellular phone key pad back light, for devices of display modules and for indicators of various electrical appliances.

### 2. Features

- ◆ Small Footprint Surface Mount Package ( 1.6 L × 0.8 W × 0.4 H [mm])
- ◆ Forward Voltage( $V_F$ ) from 2.6 to 3.4V @ Forward Current( $I_F$ )=10mA
- ◆ Operation Temperature from -30℃ to +85℃
- ◆ High Electric Static Discharge(ESD) Voltage above than 1,000V for HBM
- ◆ High Luminous Intensity( $I_v$ ) is typical 250mcd @  $I_F$ =10mA

### 3. Application

- ◆ Cellular Phone Key Pad Back Light
- ◆ Indoor Display Modules
- ◆ Indicators for Electrical Appliances

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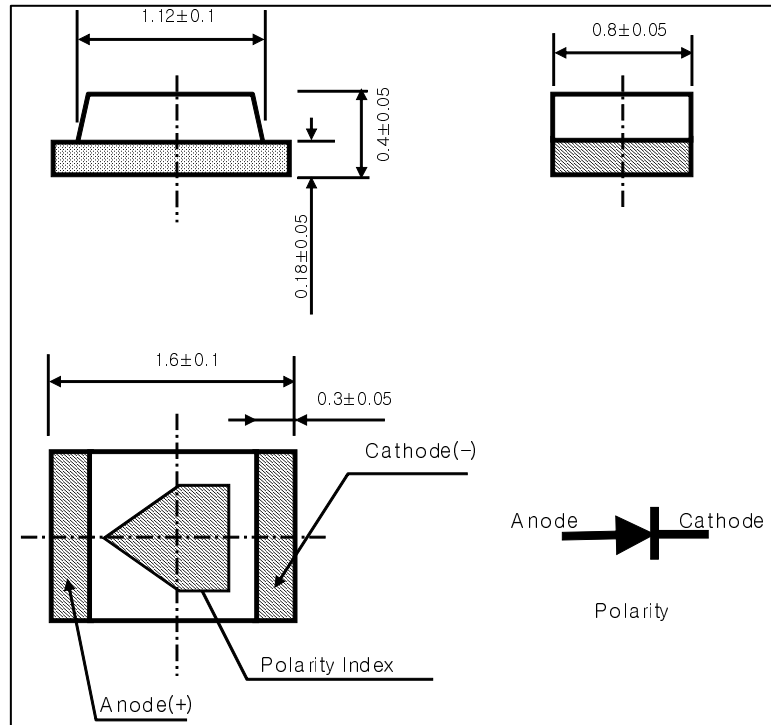
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.  
When using this product, would you please refer to the latest specifications.

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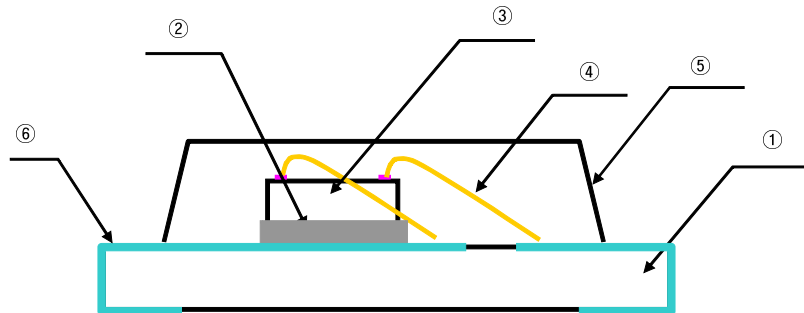
4. Outline Dimensions and Material Descriptions

◆ Outline Dimensions

[PKG Weight 0.0006g]



◆ Material Descriptions



No.	Item	Material
①	Frame Resine	FR-4
②	Paste	Clear Epoxy
③	White LED Chip	InGaN/Al <sub>2</sub> O <sub>3</sub>
④	Wire	Au
⑤	Encapsulant	EMC
⑥	Electrode	Ag

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## 5. Absolute Maximums

ITEM	Symbol	MIN	MAX	Unit	Conditions
Forward Current	$I_F$	-	20	mA	
Peak Forward Current*	$I_{FP}$	-	50	mA	
Power Dissipation	$P_D$	-	70	mW	
Reverse Voltage	$V_R$	-	5	V	
Operating Temperature	$T_{OP}$	-30	85	°C	
Storage Temperature	$T_s$	-40	100	°C	
Soldering Temperature	$T_{sol}$		260	°C	5 Sec

\* Remark : Duty Ratio  $\leq 1/10$ , Pulse Width  $\leq 10$ ms

6. Electro-Optical Characteristics ( $T_A = 25^\circ\text{C}$ )

ITEM	Symbol	MIN	TYP	MAX	Unit	Conditions
Forward Voltage	$V_F$	2.6	3.0	3.4	V	$I_F=10\text{mA}$
Intensity	$I_V$	100	250	400	mcd	$I_F=10\text{mA}$
Dominant Wavelength	$W_D$	525	-	535	nm	$I_F=10\text{mA}$
Reverse Current	$I_R$	-	-	10	$\mu\text{A}$	$V_R=5\text{V}$
FWHM	$\Delta\lambda$	-	35	-	nm	$I_F=10\text{mA}$
Half angle	$\Delta\theta$		160		deg	$I_F=10\text{mA}$

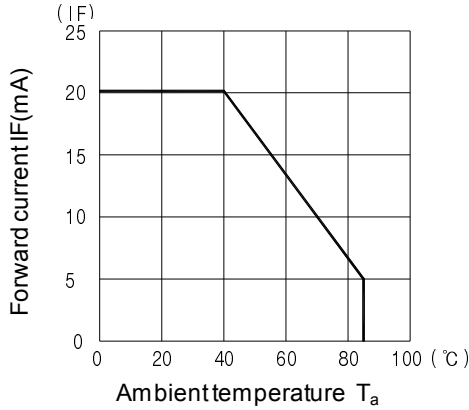
## 7. Ranks

Rank Table @ $I_F = 10\text{mA}$		
$V_F$ Rank [V]	$W_D$ Rank [nm]	Luminous Intensity Range[mcd]
1 : 2.6 ~ 2.9	a : 525~530	A : 100 ~ 200
2 : 2.9 ~ 3.2	b : 530~535	B : 200 ~ 300
3 : 3.2 ~ 3.4		<del>C : 300 ~ 400</del>

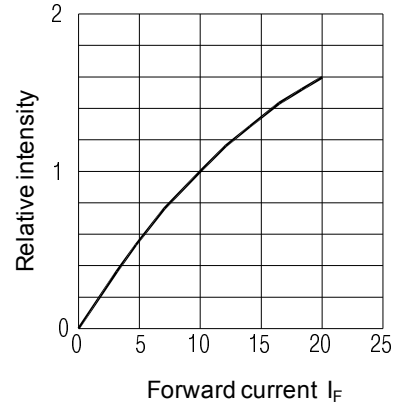
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**8. Characteristic Graphs**

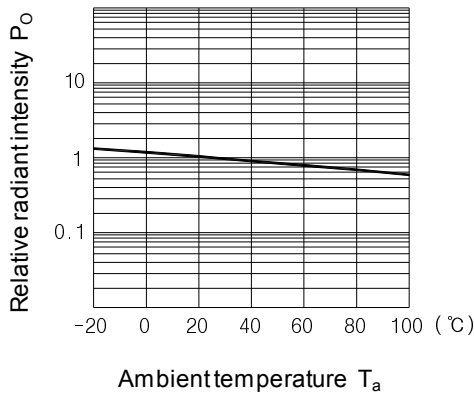
**Forward current vs. Ambient temperature**



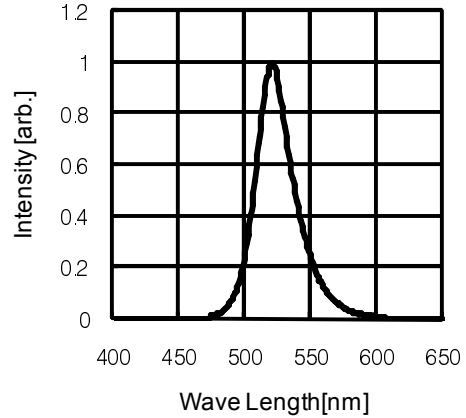
**Radiant Intensity vs. Forward current**



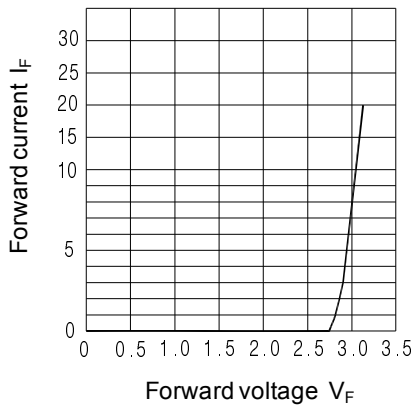
**Relative radiant intensity vs. Ambient temperature**



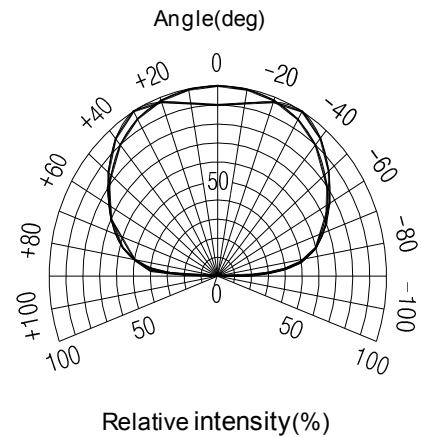
**Relative intensity vs. Wavelength**



**Forward current vs. Forward voltage**



**Radiant Pattern**



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