

1. Descriptions

The KB1608B46 (KLB-16B) 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 -20℃ to +85℃
- ◆ High Electric Static Discharge(ESD) Voltage above than 1,000V for HBM
- ◆ High Luminous Intensity(I_v) is typical 60mcd @ I_F =10mA

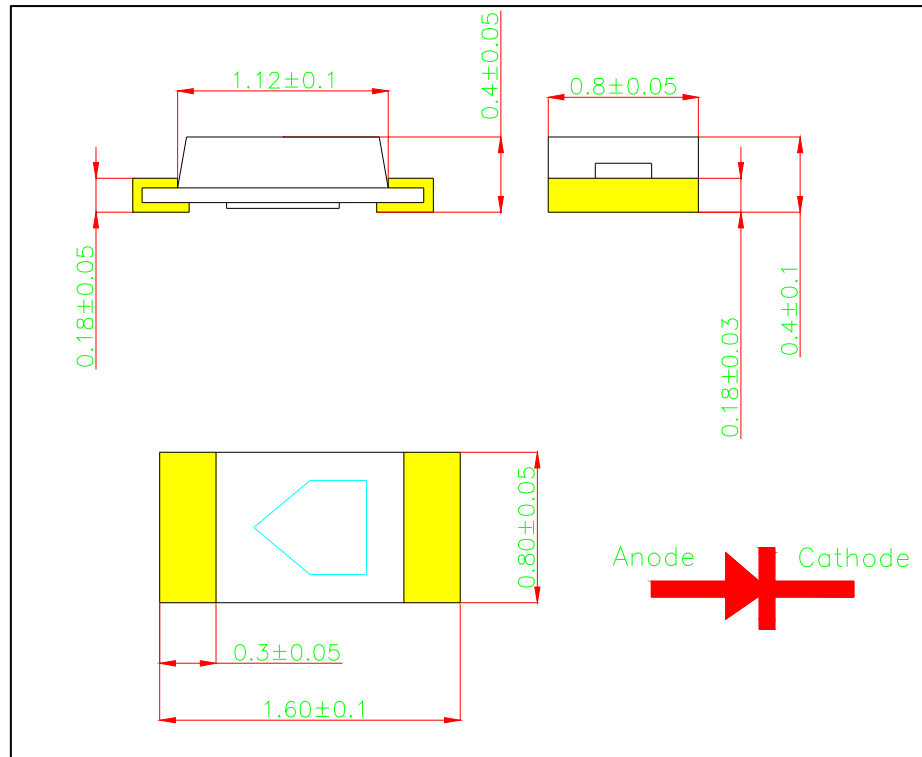
3. Application

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

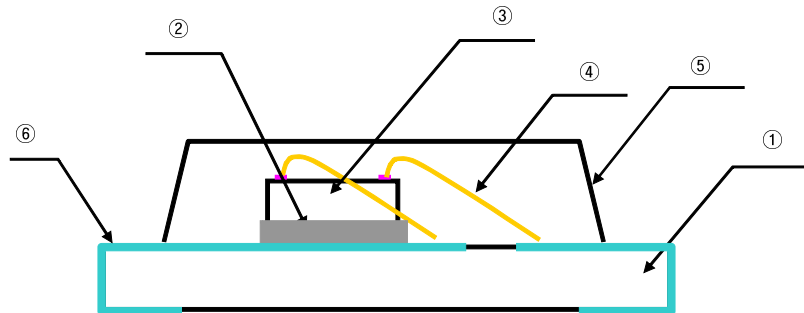
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

4. Outline Dimensions and Material Descriptions

◆ Outline Dimensions



◆ Material Descriptions



No.	Item	Material
①	PCB	BT Resin
②	Paste	Ag Epoxy
③	LED Chip	InGaN/Al ₂ O ₃
④	Wire	Au
⑤	Encapsulant	Clear Epoxy
⑥	Electrode	Au Plated Cu

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	-	20	mA	
Peak Forward Current*	I_{FP}	-	70	mA	
Power Dissipation	P_D	-	80	mW	
Reverse Voltage	V_R	-	5	V	
Operating Temperature	T_{OP}	-20	85	°C	
Storage Temperature	T_s	-30	100	°C	
Soldering Temperature	T_{sol}		260	°C	5 Sec

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

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

ITEM	Symbol	MIN	TYP	MAX	Unit	Conditions
Forward Voltage	V_F	2.7	-	3.3	V	$I_F=10\text{mA}$
Intensity	I_V	25	60	100	mcd	$I_F=10\text{mA}$
Dominant Wavelength	W_D	465	-	478	nm	$I_F=10\text{mA}$
Reverse Current	I_R	-	-	10	μA	$V_R=5\text{V}$
FWHM	$\Delta\lambda$	-	25	-	nm	$I_F=10\text{mA}$
Half angle	$\Delta\theta$		160		deg	$I_F=10\text{mA}$

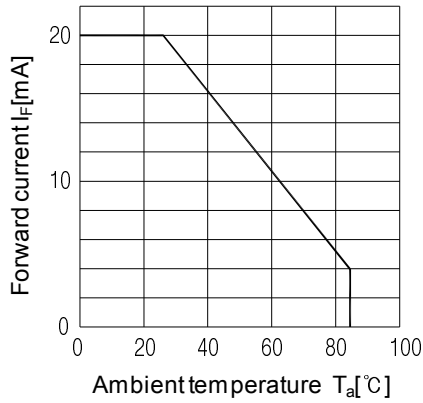
7. Ranks

Rank Table @ $I_F = 10\text{mA}$		
V_F Rank [V]	λ_D Rank [nm]	Luminous Intensity Range[mcd]
1 : 2.7 ~ 2.9	a : 465~470	Q : 25 ~ 40
2 : 2.9 ~3.1	b : 470~475	R : 40 ~ 55
3 : 3.1 ~3.3	c : 475~478	S : 55 ~ 70
		T : 70 ~ 85
		U : 85 ~ 100

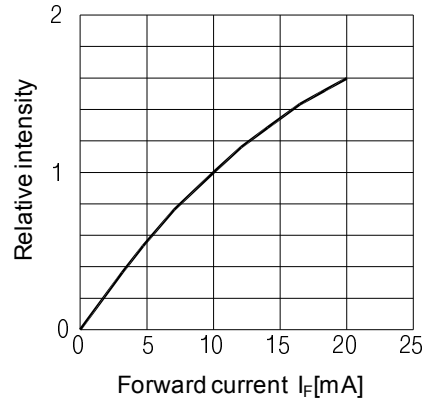
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

8. Characteristic Graphs

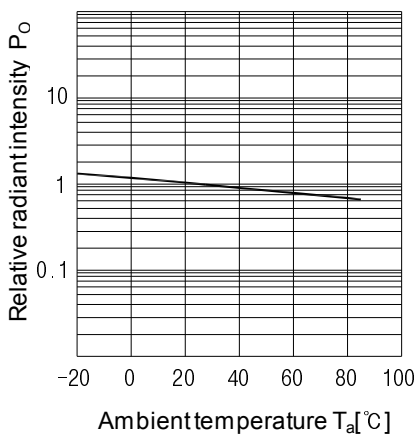
Forward current vs. Ambient temperature



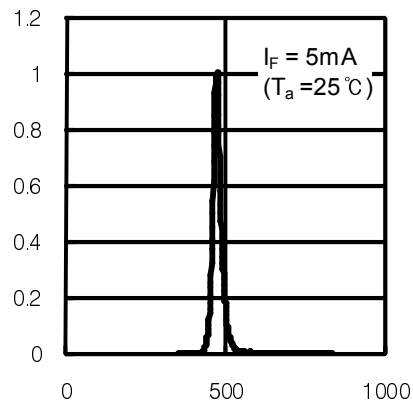
Radiant Intensity vs. Forward current



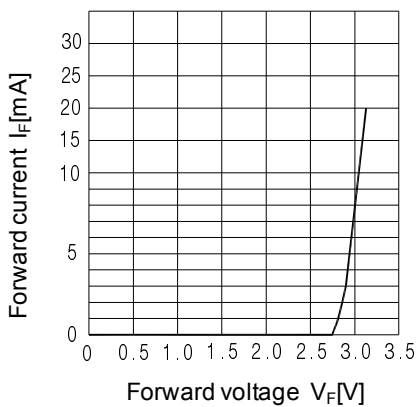
Relative radiant intensity vs. Ambient temperature



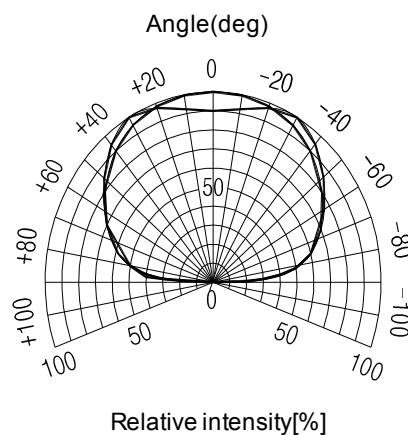
Relative intensity vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern



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.