KB1611W00 (KLB-11W)

1. Descriptions

The KB1611W00 (KLB-11W) 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

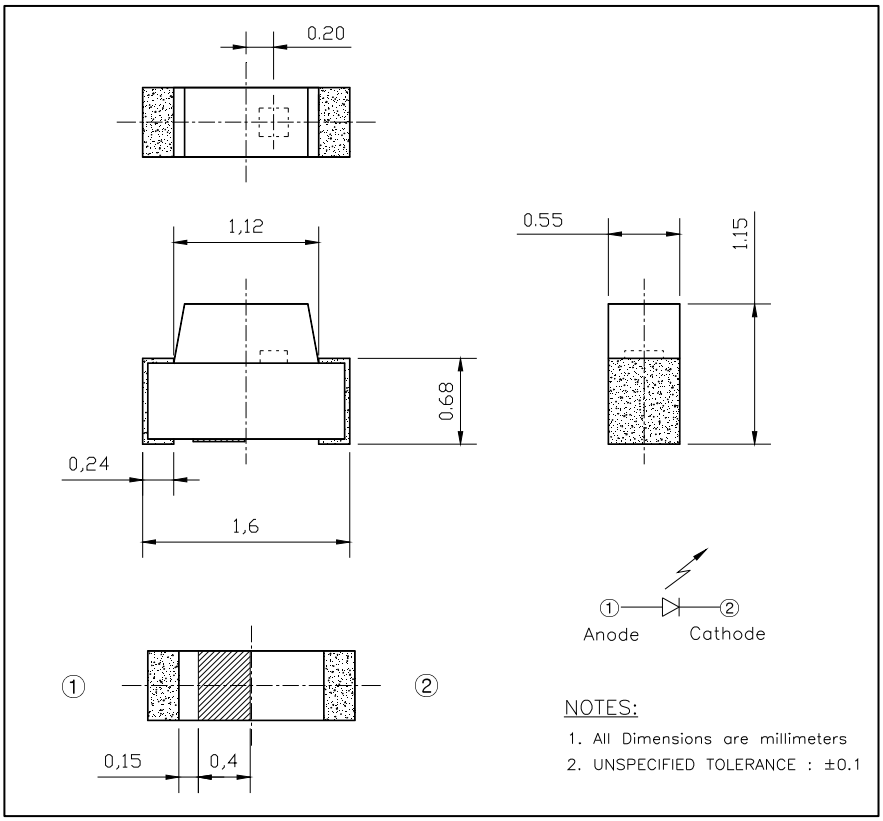
- Small Footprint Surface Mount Package (1.6L×0.55W×1.15H [㎜])
- Forward Voltage(V_F) from 2.7 to 3.4V @ Forward Current(I_F)=10mA
- Operation Temperature from -20℃ to +85℃
- High Electric Static Discharge(ESD) Voltage above than 1,000V for HBM
- High Luminous Intensity(I_V) is typical 100mcd @ I_F=10mA

3. Application

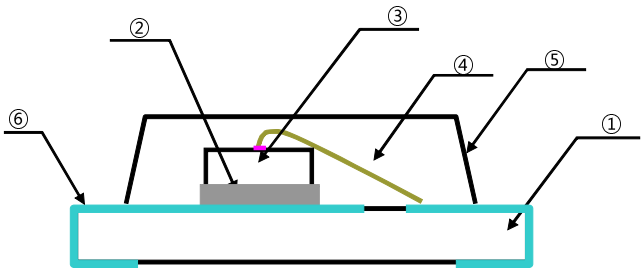
- Cellular Phone Key Pad Back Light
- Indoor Display Modules
- Indicators for Electrical Appliances

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_2O_3
④	Wire	Au
⑤	Encapsulant	Clear Epoxy
⑥	Electrode	Au Plated Cu

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	℃	
Storage Temperature	Ts	-40	100	℃	
Soldering Temperature	T_{sol}		260	℃	5 Sec

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

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

ITEM	Symbol	MIN	TYP	MAX	Unit	Conditions
Forward Voltage	V_F	-	2.9	-	V	I_F=10mA
Intensity	I_V	-	100	-	mcd	I_F=10mA
Color Coordinate	X	-	0.270	-		I_F=10mA
	Y	-	0.268	-		
Reverse Current	I_R	-	-	10	μA	V_R=5V
FWHM	△λ	-	35	-	nm	I_F=10mA
Half angle	Δθ		160		deg	I_F=10mA

*1. Luminous intensity is tested at a current pulse duration of 20ms and accuracy of ±10%.

*2. Voltages are tested at a current pulse duration of 1ms and accuracy of ±0.05V.

*3. The Measurement tolerance of color coordinate is 0.01.

*4. Θ 1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity.

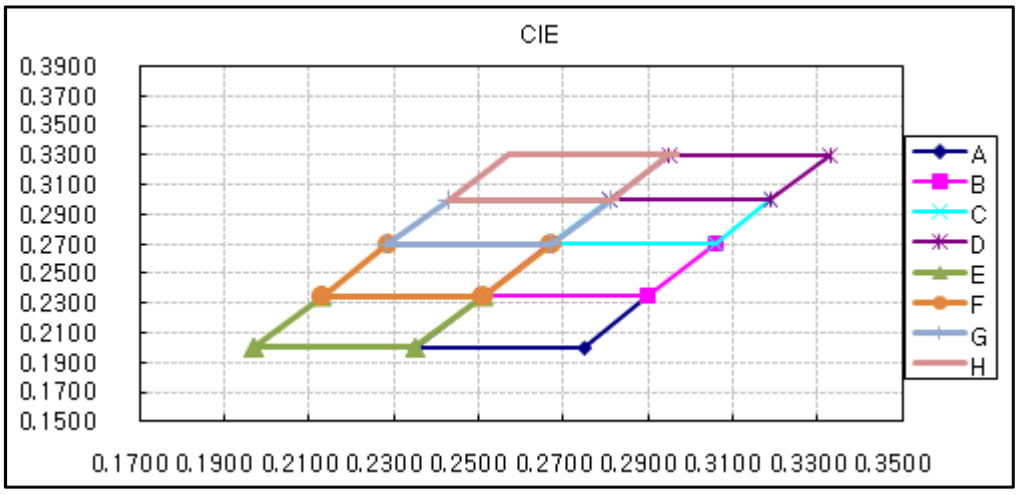
◆ **V_F / I_V / Chromaticity Rank @I_F=10mA**

Luminous Intensity Range[mcd]		
Forward Voltage [V]	Luminous Intensity [mcd]	Chromaticity
1 : 2.70 ~2.85	A : 55 ~ 110	A
2 : 2.85 ~2.95	B : 110 ~ 160	B
3 : 2.95 ~3.05	C : 160 ~ 250	C
4 : 3.05 ~3.15	D : 250 ~ 340	D
5 : 3.15 ~3.40		

7. Ranks

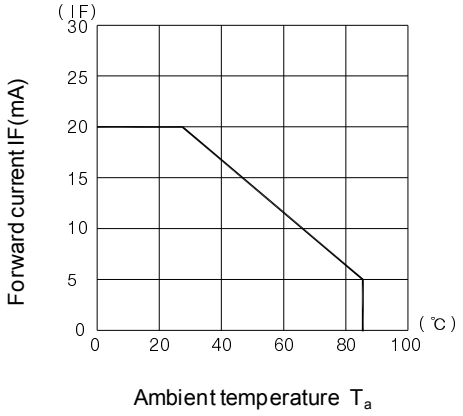
◆ **Chromaticity Ranks** Ta=25℃ (I_F=10mA)

Rank	X	Y	Rank	X	Y
A	0.2350 0.2750 0.2900 0.2510 0.2350	0.2000 0.2000 0.2350 0.2350 0.2000	E	0.1970 0.2350 0.2510 0.2130 0.1970	0.2000 0.2000 0.2350 0.2350 0.2000
B	0.2510 0.2900 0.3060 0.2670 0.2510	0.2350 0.2350 0.2700 0.2700 0.2350	F	0.2130 0.2510 0.2670 0.2285 0.2130	0.2350 0.2350 0.2700 0.2700 0.2350
C	0.2670 0.3060 0.3190 0.2810 0.2670	0.2700 0.2700 0.3000 0.3000 0.2700	G	0.2285 0.2670 0.2810 0.2430 0.2285	0.2700 0.2700 0.3000 0.3000 0.2700
D	0.2810 0.3190 0.3330 0.2950 0.2810	0.3000 0.3000 0.3300 0.3300 0.3000	H	0.2430 0.2810 0.2950 0.2570 0.2430	0.3000 0.3000 0.3300 0.3300 0.3000

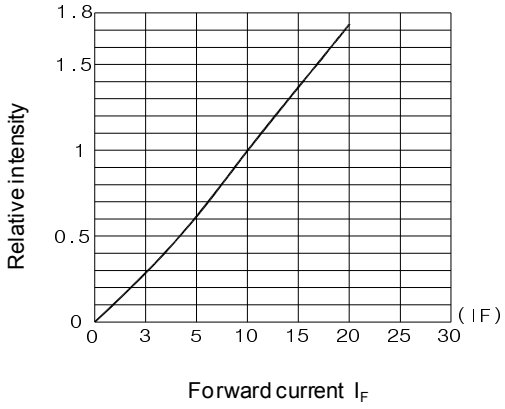


8. Characteristic Graphs

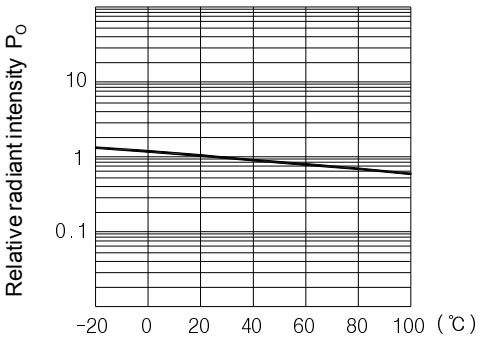
Forward current vs. Ambient temperature



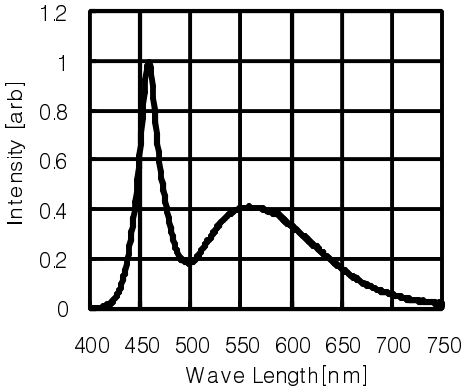
Radiant Intensity vs. Forward current



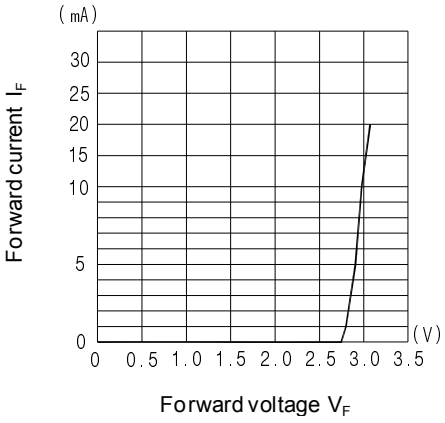
Relative radiant intensity vs. Ambient temperature



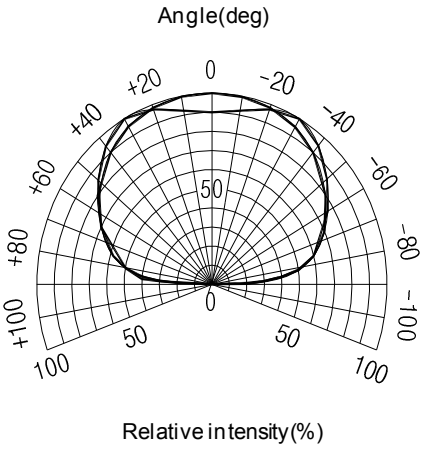
Relative intensity vs. Wavelength



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.