



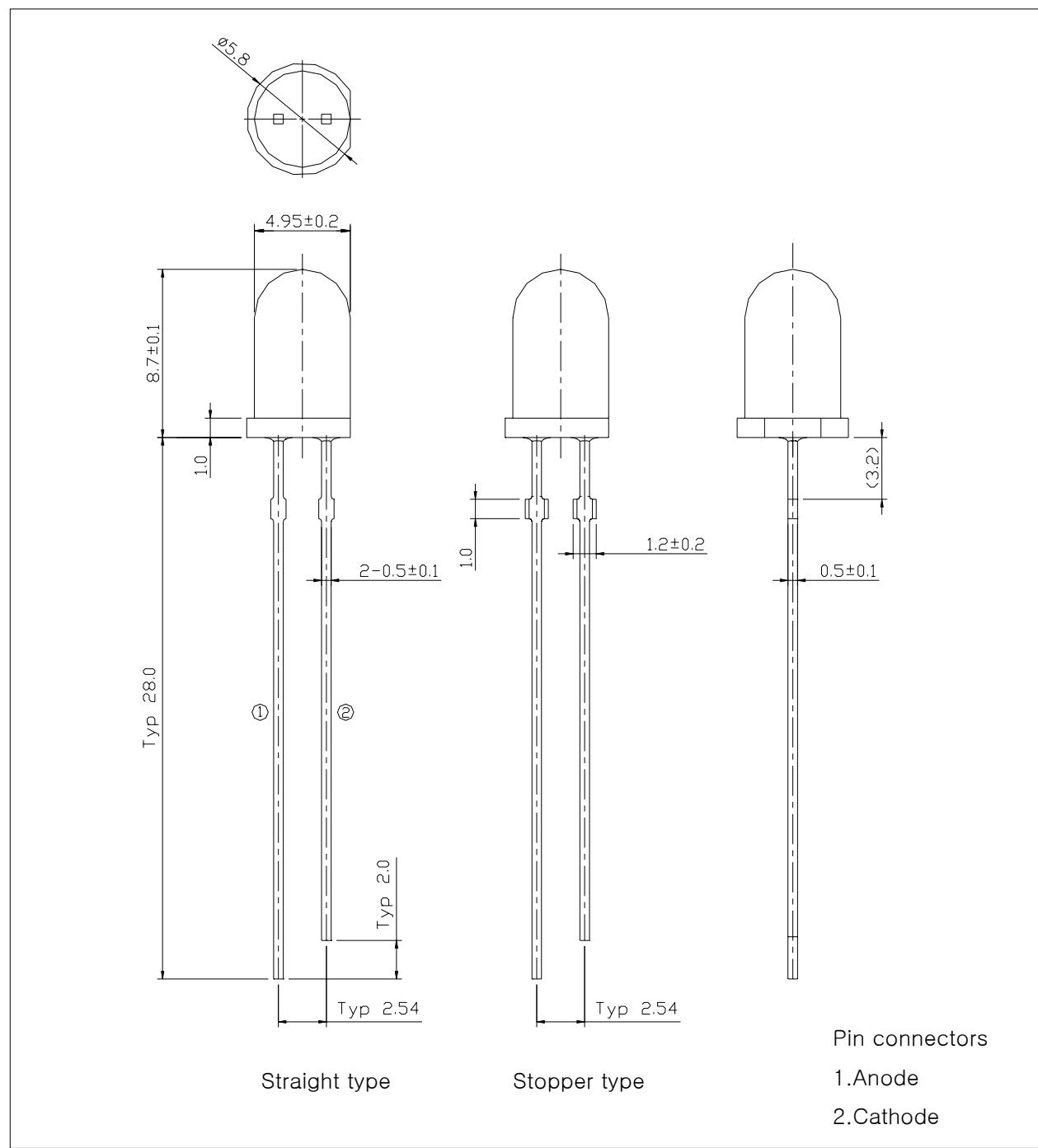
**LBH5000**  
High Brightness LED Lamp

## ■ Features

- Colorless transparency lens type
- $\phi 5\text{mm}(\text{T}-1\frac{3}{4})$  all plastic mold type
- High luminosity
- ESD Class(Mil Std-883d Method 3015.7) based on Human Body Model(HBM) : 950V

## ■ Outline dimensions

(unit : mm)



## ■ Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Power dissipation	P <sub>D</sub>	100	mW
Forward Current	I <sub>F</sub>	30	mA
* <sup>1</sup> Peak Forward Current	I <sub>FP</sub>	50	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-25~85	°C
Storage Temperature	T <sub>stg</sub>	-30~100	°C
* <sup>2</sup> Soldering Temperature	T <sub>sol</sub>	260 °C for 3 seconds	

\*1.Duty ratio = 1/16, Pulse width = 0.1ms

\*2.Keep the distance more than 2.0mm from PCB to the bottom of LED package

## ■ Electrical – Optical characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
ESD Check Forward Voltage	V <sub>F2</sub>	I <sub>F</sub> = 10μA	2.0	–	–	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	–	–	50	uA
Dominant Wavelength	λ <sub>d</sub>	I <sub>F</sub> = 20mA	465	–	475	nm
Spectrum Bandwidth	Δλ	I <sub>F</sub> = 20mA	–	35	–	nm
* <sup>3</sup> Half Angle	θ1/2	I <sub>F</sub> = 20mA	–	±8	–	deg

\*3. θ1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

## ■ Dominant Wavelength

(Ta=25°C)

W <sub>D</sub> RANK	Test Condition	Min.	Typ.	Max.	Unit
A	I <sub>F</sub> = 20mA	465	–	470	nm
B		470	–	475	

\* Wavelength are tested at a current pulse duration 25ms and an accuracy of ±1 nm.

## ■ Luminous intensity ranks

(Ta=25°C)

I <sub>v</sub> RANK	Test Condition	Min.	Typ.	Max.	Unit
P	I <sub>F</sub> = 20mA	1200	–	1700	mcd
Q		1700	–	2400	
R		2400	–	4800	
S		4800	–	6700	

\* Luminous intensity is tested at a current pulse duration of 25 ms and an accuracy of ±11%.

Intensity Measured : 0.01sr(CIE. LED\_B)

## ■ Forward Voltage

(Ta=25°C)

V <sub>F</sub> RANK	Test Condition	Min.	Typ.	Max.	Unit
1	I <sub>F</sub> = 20mA	–	3.1	3.3	V
2		3.3	3.5	3.8	

\* Voltages are tested at a current pulse duration of 1 ms and an accuracy of ±0.1V.

## ■ Precautions On LED using

\* To avoid optical difference, Please do not mix differently-ranked product.

## ■ Characteristic Diagrams

Fig. 1 If-VF

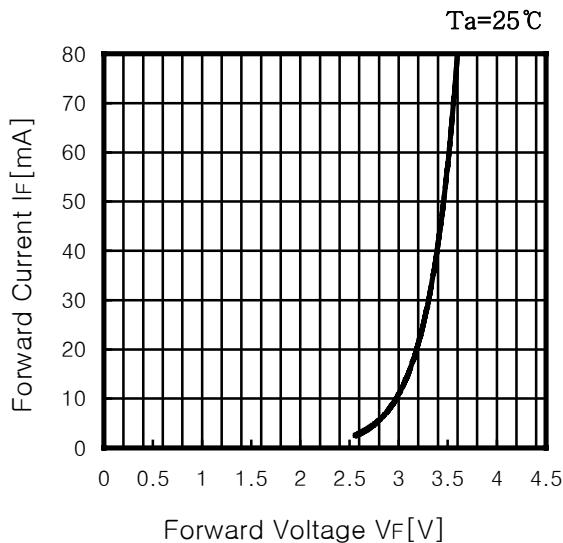


Fig. 2 Iv-If

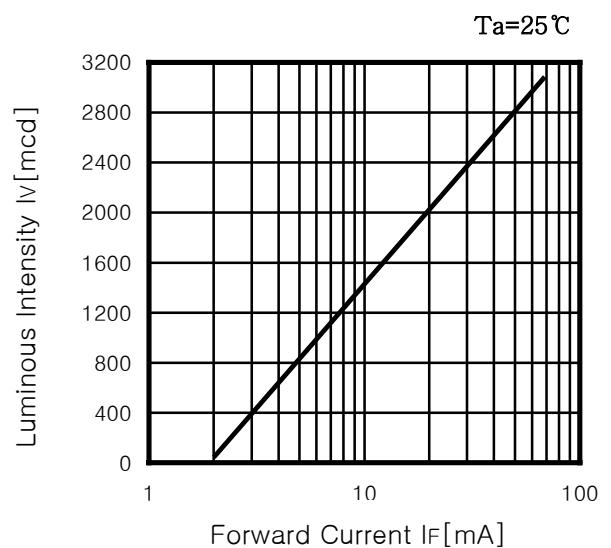


Fig. 3 If-Ta

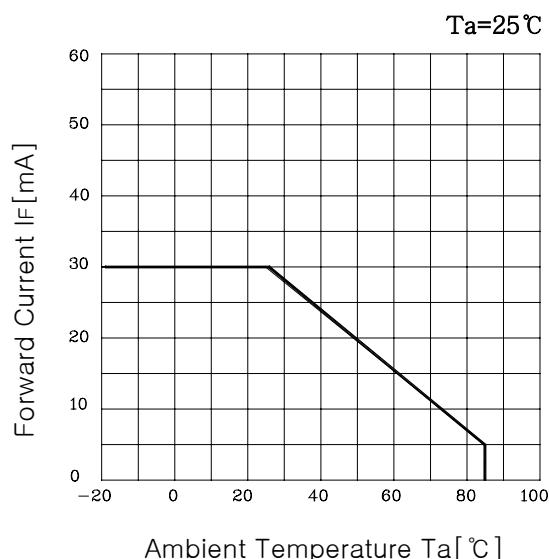


Fig. 4 Spectrum Distribution

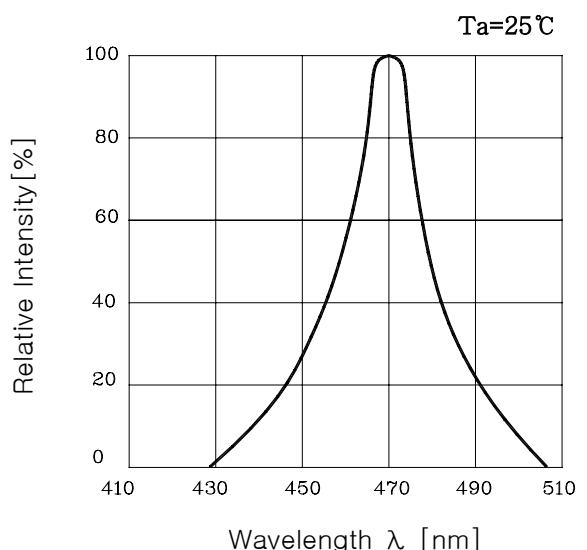
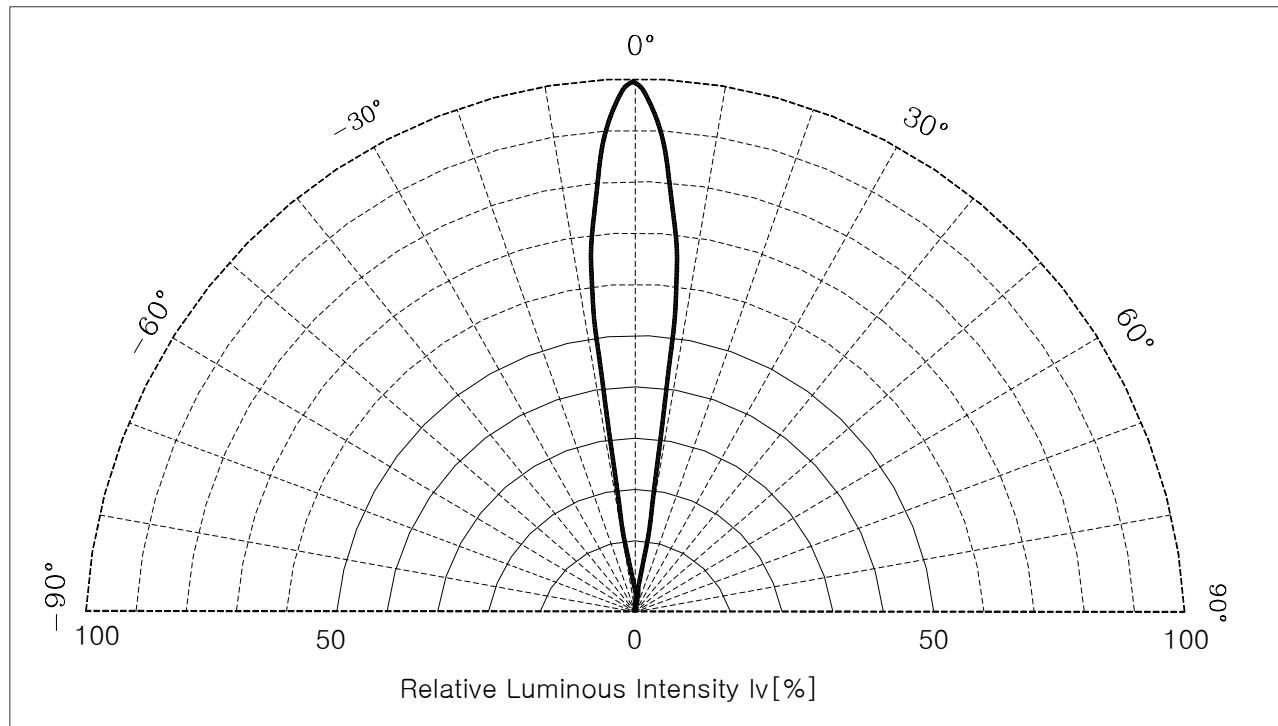


Fig. 4 Radiation Characteristics





## ■ Revision history sheet

Spec NO.			
Title	Specification for Approval		
Times	Date	Summary of revision	Remarks
1	2001. 07. 15	신규제정	
2	2003. 02. 26	Format 변경	