

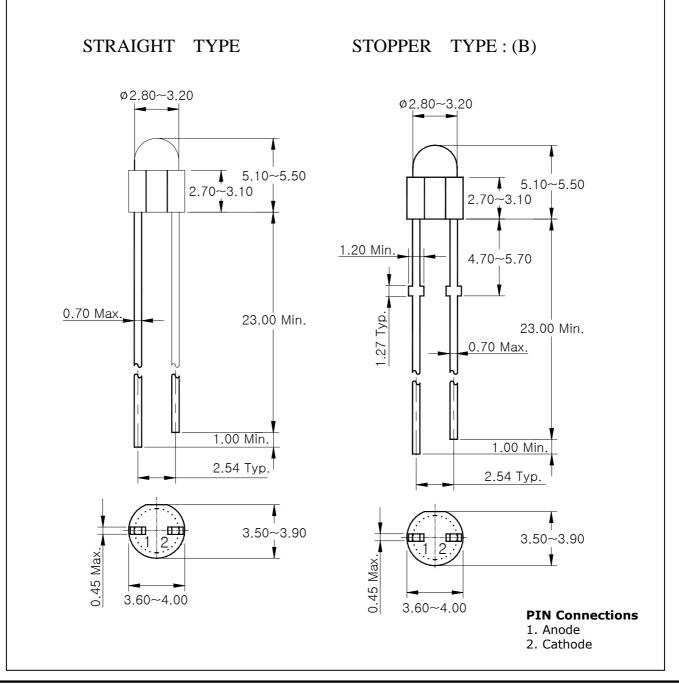
**High Brightness LED Lamp** 

unit : mm

#### Features

- Colorless transparency lens type
- $\phi$ 3mm(T-1) all plastic mold type
- Super luminosity
- E ; ESD Protected ( $\pm 2.0$ KV, 3 times @100pF, 1.5K $\Omega$ )

### **Outline Dimensions**



#### **Absolute Maximum Ratings**

		(14 10 0)		
Characteristic	Symbol	Rating	Unit	
Power dissipation	P <sub>D</sub>	75	mW	
Forward current	I <sub>F</sub>	20	mA	
* <sup>1</sup> Peak forward current	I <sub>FP</sub>	50	mA	
Reverse voltage	V <sub>R</sub>	4	V	
Operating temperature range	T <sub>opr</sub>	-25~85	C	
Storage temperature range	T <sub>stg</sub>	$-30 \sim 100$	C	
* <sup>2</sup> Soldering temperature	T <sub>sol</sub>	260℃ for 10 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



\* Recommend document

-. LED is very sensitive to ESD.

#### **Electrical / Optical Characteristics**

#### (Ta=25°C)

 $(Ta=25^{\circ}C)$ 

Characteristic	Symbol	<b>Test Condition</b>	Min.	Тур.	Max.	Unit
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	2.9	-	3.8	V
* <sup>4</sup> Luminous intensity	$I_V$	I <sub>F</sub> = 20mA	230	-	1170	mcd
Dominant wavelength	$\lambda_{D}$	I <sub>F</sub> = 20mA	460	468	475	nm
Spectrum bandwidth	$\Delta_{\lambda}$	I <sub>F</sub> = 20mA	-	26	-	nm
Reverse current	I <sub>R</sub>	V <sub>R</sub> =4V	-	-	10	uA
* <sup>3</sup> Half angle	θ1/2	I <sub>F</sub> = 20mA	-	±22	-	deg

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

\*4. Luminous intensity maximum tolerance for each grade classification limit is  $\pm 18\%$ 

 $\bullet$  V\_F /  $I_V$  /  $\lambda_D$  Grade Classification

Test Condition $@I_F = 20mA$				
Forward Voltage [V]	Luminous Intensity [mcd]	Dominant Wavelength [nm]		
1:2.9~3.2	N : 230~350	a : 460~465		
	O:350~520			
2 : 3.2~3.5	2 : 3.2~3.5 P : 520~780			
3 : 3.5~3.8	0	c:470~475		
	Q:780~1170			

(Do not use to combine grade classification. It must be used separately grade classification)

### **Characteristic Diagrams**

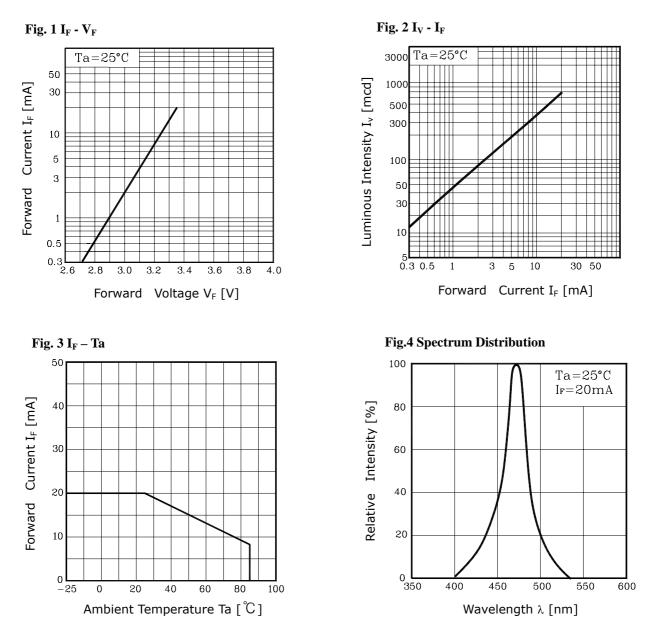
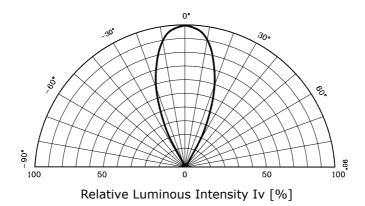


Fig. 5 Radiation Diagram



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