AUK Semiconductor

SB1314E-V

Chip LED Lamp

Features

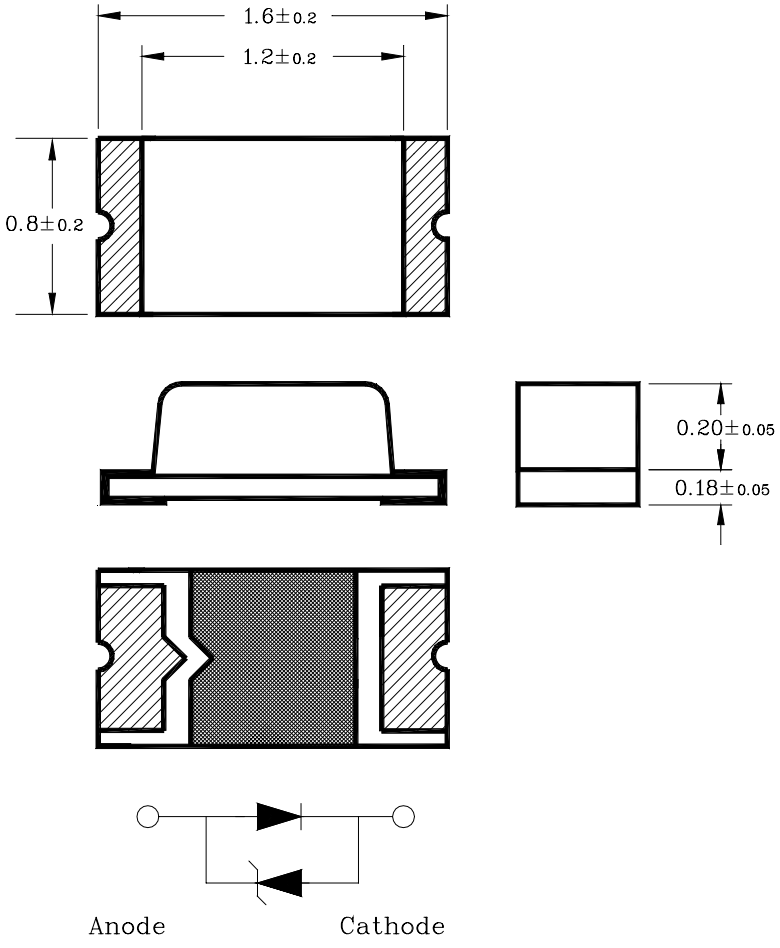
- 1.6mm(L)×0.8mm small size surface mount type
- Thin package of 0.4mm(H) thickness
- Transparent clear lens optic
- Low power consumption type chip LED
- Emitting Light Blue(470nm)
- **E ; ESD Protected (±2.0kv, 3 times @100pF, 1.5kΩ)**

Applications

- LCD backlighting
- Keypad backlighting
- Symbol backlighting
- Front panel indicator lamp

Outline Dimensions

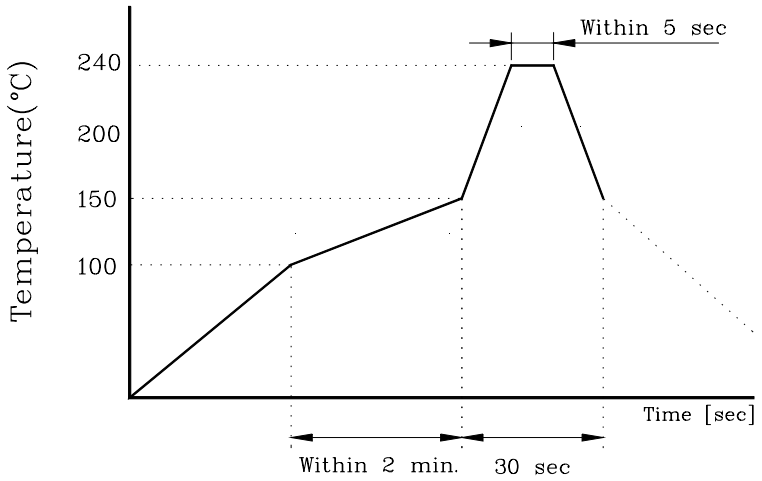
unit : mm



Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Power Dissipation	P_D	75	mW
Forward Current	I_F	20	mA
*[1]Peak Forward Current	I_{FP}	50	mA
Operating Temperature	T_{opr}	-25～80	℃
Storage Temperature	T_{stg}	-30～100	℃
*[2]Soldering Temperature	T_{sol}	240℃ for 5 seconds	

*1.Duty ratio = 1/16, Pulse width = 0.1ms
*2. Recommended soldering Temperature Profile
2-1) Preheating 100℃ to 150℃ within 2 minutes Soldering 240℃ within 5 seconds
Gradual cooling (Avoid quenching)



Electrical Characteristics

Characteristic	Symbol		Test Condition	Min	Typ	Max	Unit
***[3]Forward Voltage	V_F		I_F= 5mA	2.6	3.1	3.5	V
*[4]Luminous Intensity	I_V		I_F= 5mA	5	22	40	mcd
*[6]Peak Wavelength	λ_P		I_F= 5mA	460	470	485	nm
Spectrum Bandwidth	$\Delta\lambda$		I_F= 5mA	-	35	-	nm
*[5]Half Angle	$\theta 1/2$	X	I_F= 5mA	-	±65	-	deg
		Y		-	±70	-	

*3. Forward Voltage Maximum tolerance for ±0.1V

*4. Luminous Intensity Maximum tolerance for each Grade Classification limit is ±18%
(The test result of IF=20mA is only for reference)

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

*6. λp Grade Classification (λp Grade tolerance for ±3nm)

- λp / Iv / VF Grade Classification

Test Condition @IF=5mA		
Peak Wavelength	Luminous Intensity	Forward Voltage
a : 460~473	A0 : 5~9	0 : 2.6~2.7
		1 : 2.7~2.8
	A : 9~22	2 : 2.8~2.9
		3 : 2.9~3.0
b: 473~485		4 : 3.0~3.1
		5 : 3.1~3.2
	B : 22~40	6 : 3.2~3.3
		7 : 3.3~3.4
		8 : 3.4~3.5

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

Characteristic Diagrams

Fig. 1 I_F - V_F

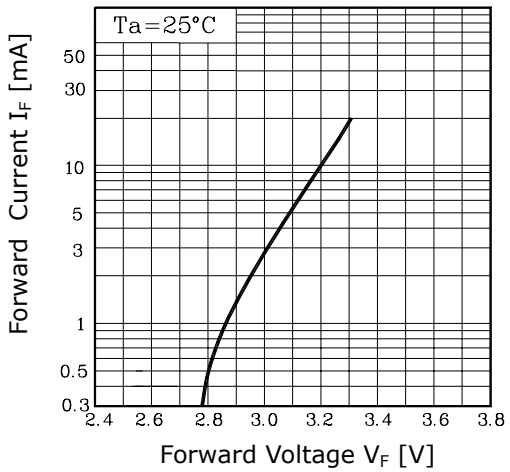


Fig. 2 I_V - I_F

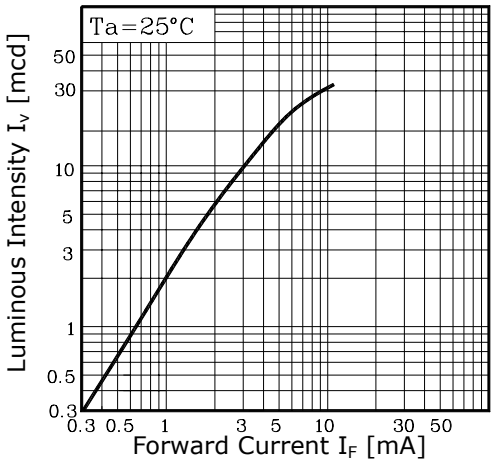


Fig. 3 I_F – Ta

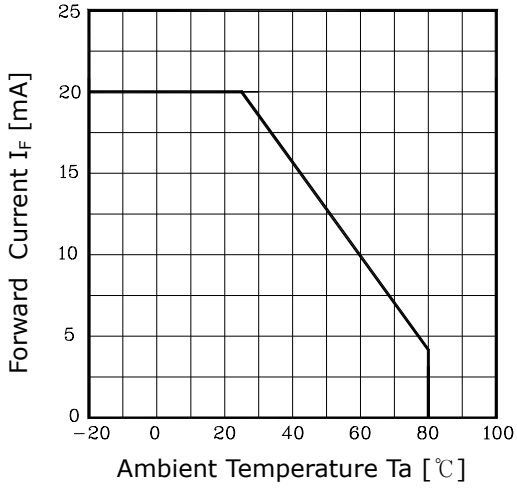


Fig.4 Spectrum Distribution

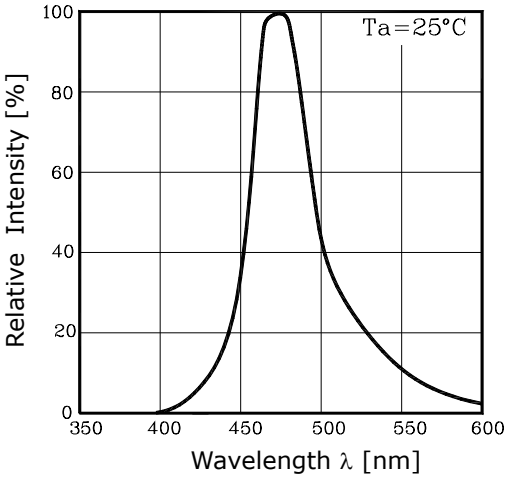


Fig. 5-1 Radiation Diagram(X)

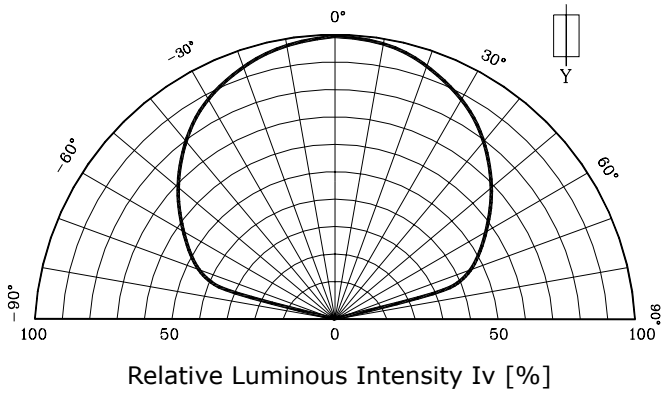


Fig. 5-2 Radiation Diagram(Y)