

Features

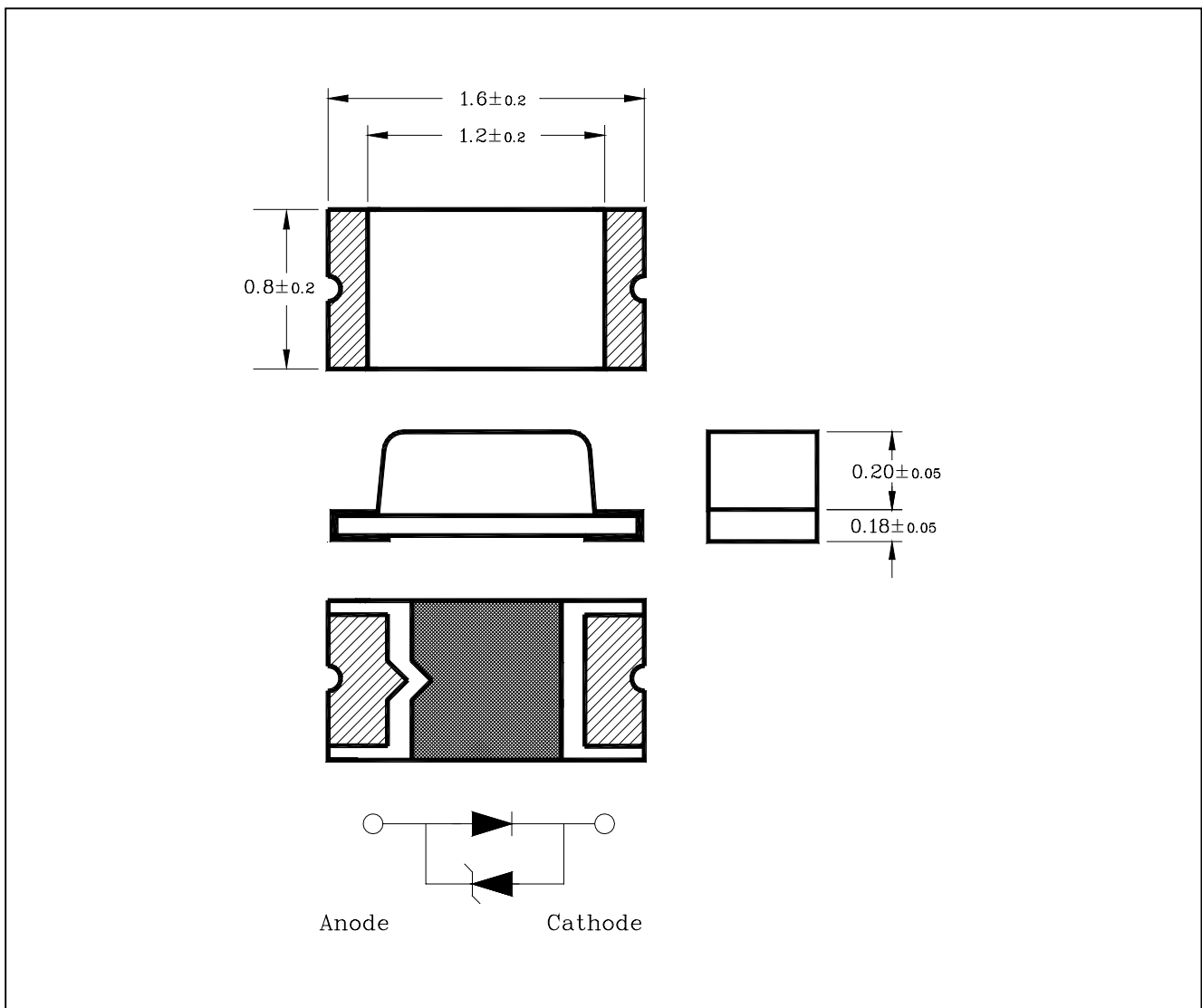
- 1.6mm(L)×0.8mm small size surface mount type
- Thin package of 0.4mm(H) thickness
- Transparent clear lens optic
- Low power consumption type chip LED
- Emitting Light Blue(470nm)
- **E ; ESD Protected (±2.0kv, 3 times @100pF, 1.5kΩ)**

Applications

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

Outline Dimensions

unit : mm



Absolute maximum ratings

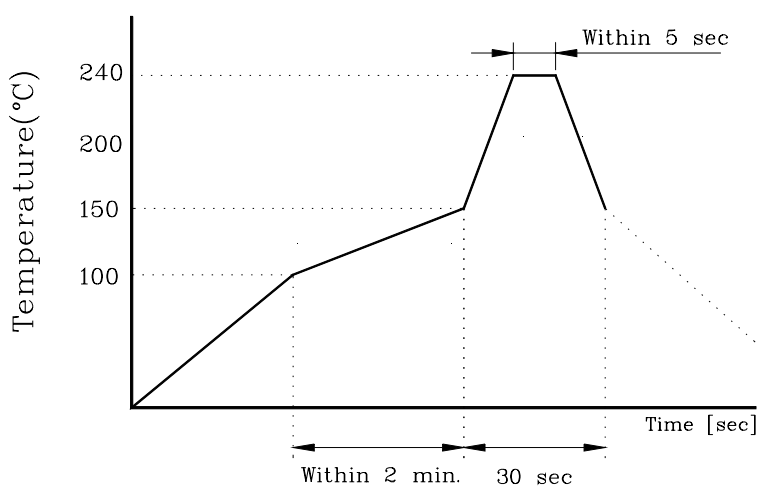
Characteristic	Symbol	Ratings	Unit
Power Dissipation	P_D	75	mW
Forward Current	I_F	20	mA
*1 Peak Forward Current	I_{FP}	50	mA
Operating Temperature	T_{opr}	-25 ~ 80	°C
Storage Temperature	T_{stg}	-30 ~ 100	°C
*2 Soldering Temperature	T_{sol}	240°C for 5 seconds	

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

*2. Recommended soldering Temperature Profile

2-1) Preheating 100°C to 150°C within 2 minutes Soldering 240°C within 5 seconds

Gradual cooling (Avoid quenching)



Electrical Characteristics

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

- *3. Forward Voltage Maximum tolerance for $\pm 0.1V$
- *4. Luminous Intensity Maximum tolerance for each Grade Classification limit is $\pm 18\%$
(The test result of $I_F=20mA$ is only for reference)
- *5. $\theta_{1/2}$ is the off-axis angle where the luminous intensity is 1/2 the peak intensity
- *6. λ_p Grade Classification (λ_p Grade tolerance for $\pm 3nm$)

- $\lambda_p / I_v / VF$ Grade Classification

Test Condition @ $I_F=5mA$		
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	B : 22~40	4 : 3.0~3.1
		5 : 3.1~3.2
		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 $I_F - V_F$

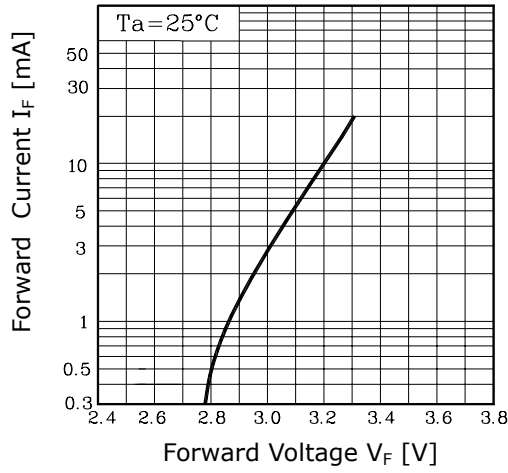


Fig. 2 $I_V - I_F$

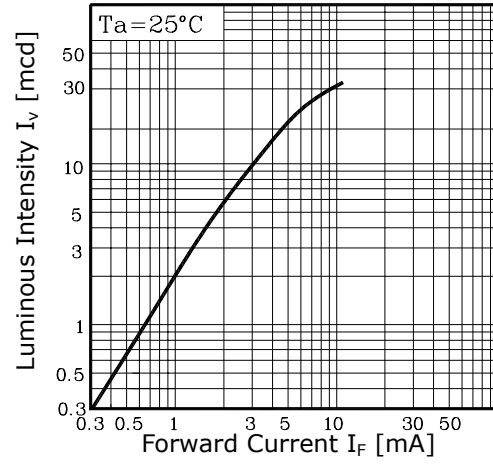


Fig. 3 $I_F - T_a$

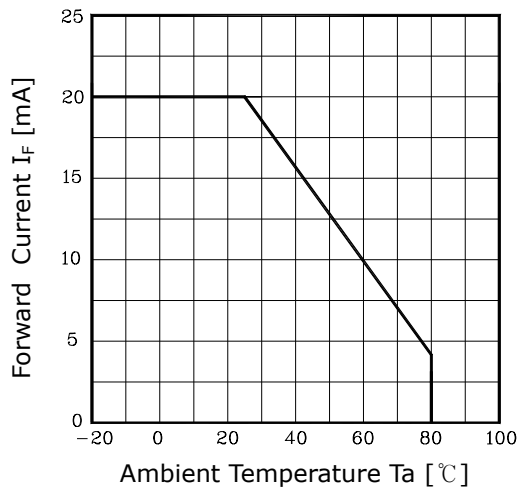


Fig.4 Spectrum Distribution

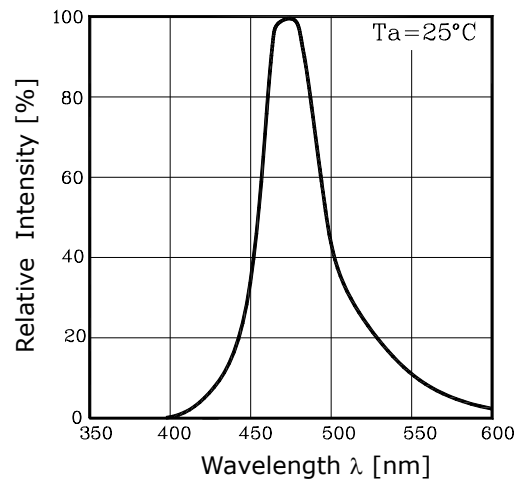


Fig. 5-1 Radiation Diagram(X)

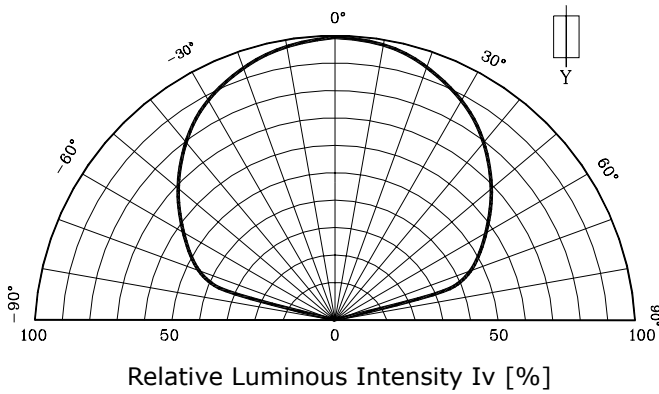


Fig. 5-2 Radiation Diagram(Y)

