

1. Features

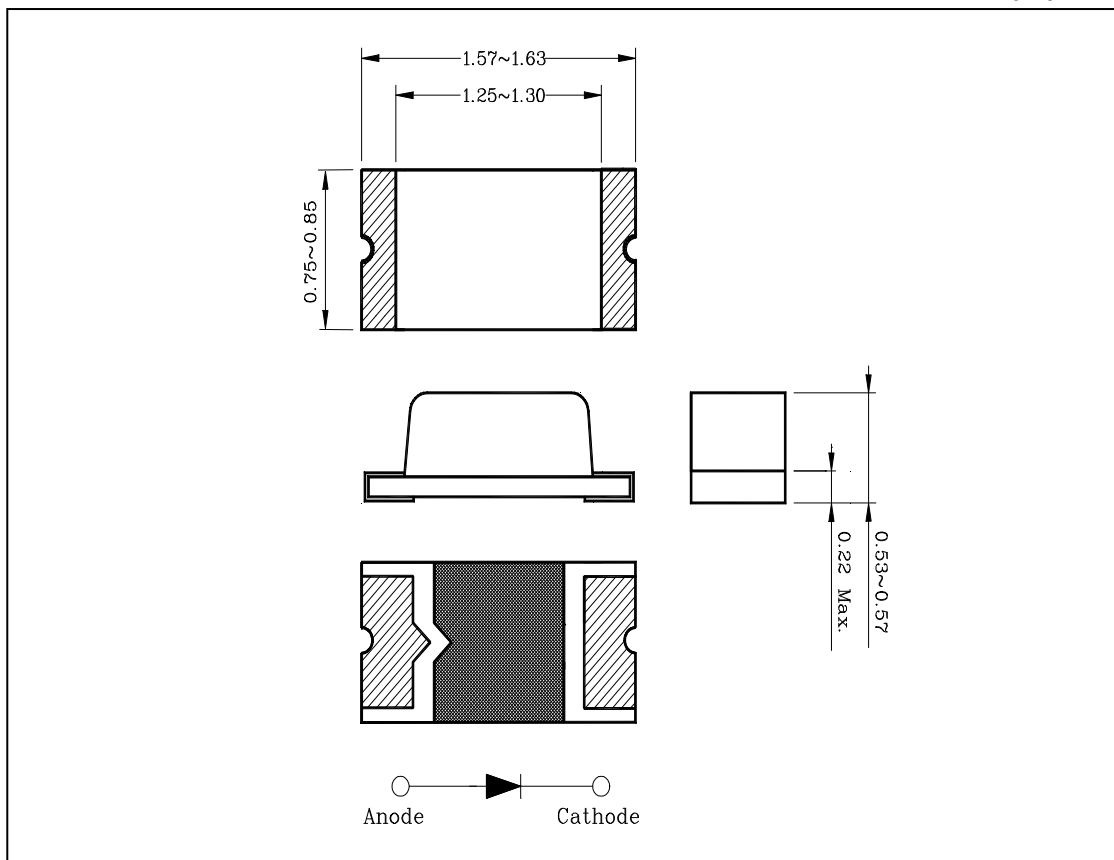
- ◆ 1.6mm(L)×0.8mm(W) small size surface mount type
- ◆ Thin package of 0.55mm(H) thickness
- ◆ Transparent clear lens optic
- ◆ Low power consumption type chip LED

2. Applications

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

3. Outline Dimensions

unit : mm



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.

4. Absolute Maximum Ratings

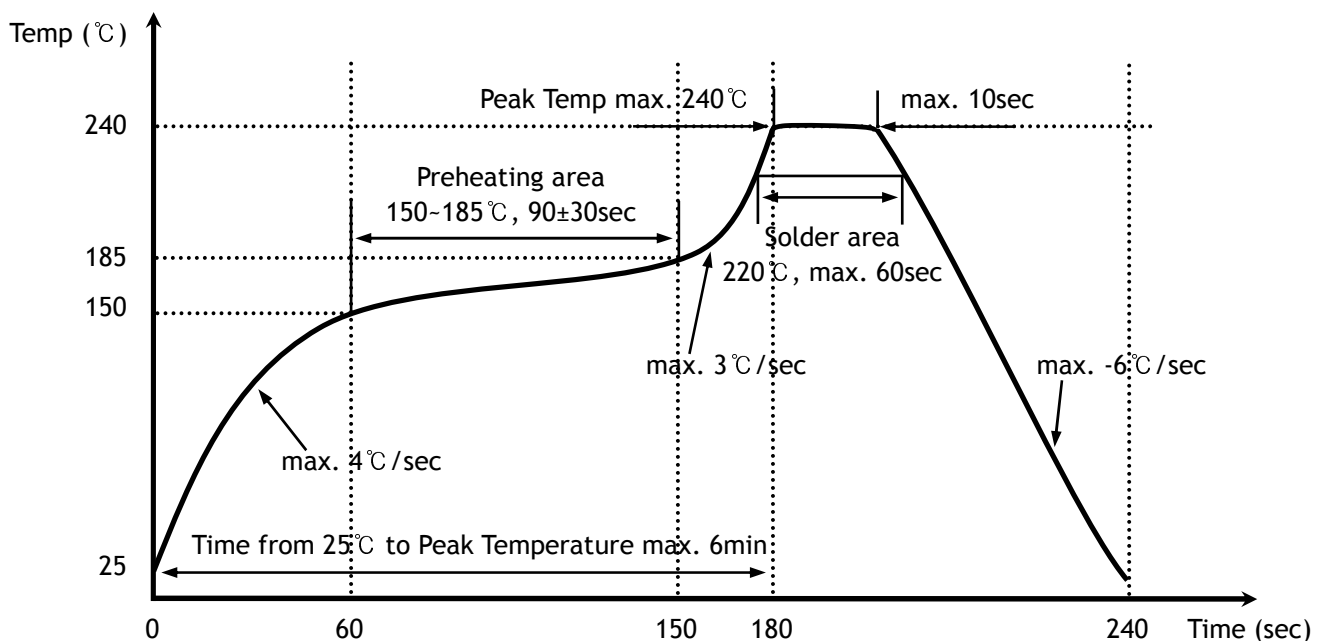
(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Power dissipation	P_D	60	mW
Forward current	I_F	25	mA
*1 Peak forward current	I_{FP}	50	mA
Reverse voltage	V_R	4	V
Operating temperature range	T_{opr}	-25~80	°C
Storage temperature range	T_{stg}	-30~100	°C
*2 Soldering temperature	T_{sol}	240°C for 10 seconds	

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

*2. Recommended reflow soldering temperature profile

- Preheating 150°C to 185°C within 120 seconds soldering 240°C within 10 seconds Gradual cooling (Avoid quenching)



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5. Electrical / Optical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F=20\text{mA}$	-	2.0	2.4	V
*3 Luminous intensity	I_V	$I_F=20\text{mA}$	27	-	155	mcd
Peak wavelength	λ_p	$I_F=20\text{mA}$	632	635	641	nm
Spectrum bandwidth	$\Delta\lambda$	$I_F=20\text{mA}$	-	35	-	nm
Reverse current	I_R	$V_R=4\text{V}$	-	-	10	μA
*4 Half angle	$\theta/2$	X	-	± 65	-	deg
		Y	-	± 70	-	

*3. The test result of $I_F=20\text{mA}$ is only for reference

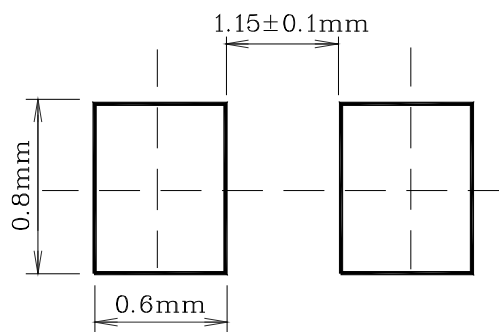
*4. $\theta/2$ is the off-axis angle where the luminous intensity is 1/2 the peak intensity

◆ $V_F / I_V / \lambda_p$ Grade Classification (Ta=25°C)

Test Condition @ $I_F = 20\text{mA}$	
Luminous Intensity [mcd]	Peak Wavelength [nm]
B : 27~43	a : 632~635
C : 43~68	
D : 68~100	b : 635~641
E : 100~155	

(Each I_V , λ_p range did not consider a margin. Please refer to $\pm 18\%$ of I_V range, $\pm 1\text{nm}$ of λ_p range as a permitted limit and do not use to combine grade classification. It must be used separately grade classification)

* Recommended Soldering Land Pattern



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6. Electrical Characteristic Curves

Fig. 1 $I_F - V_F$

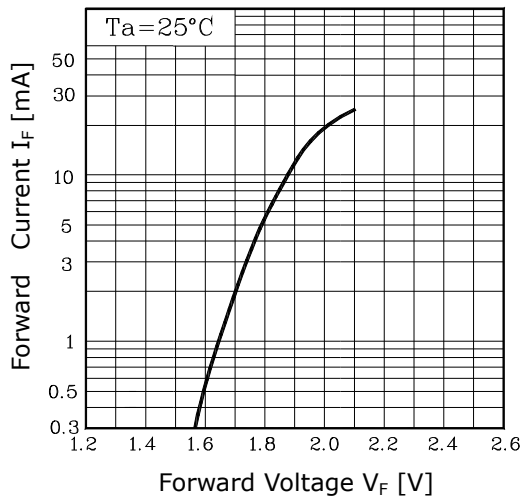


Fig. 2 $I_V - I_F$

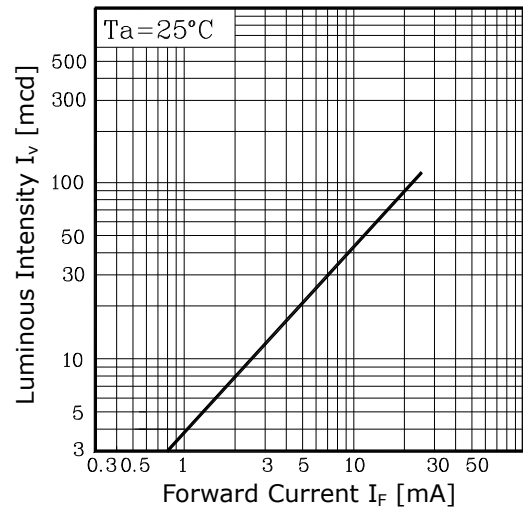


Fig. 3 $I_F - T_a$

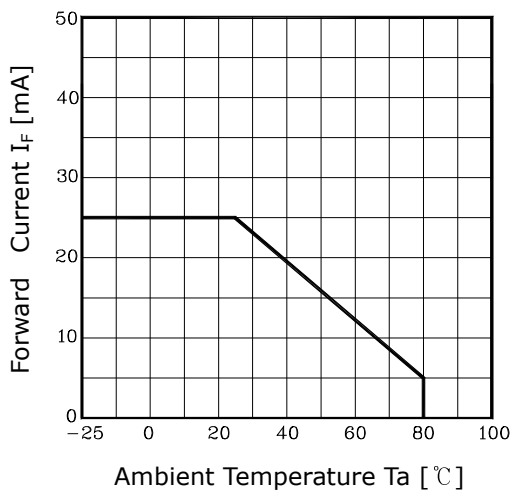


Fig.4 Spectrum Distribution

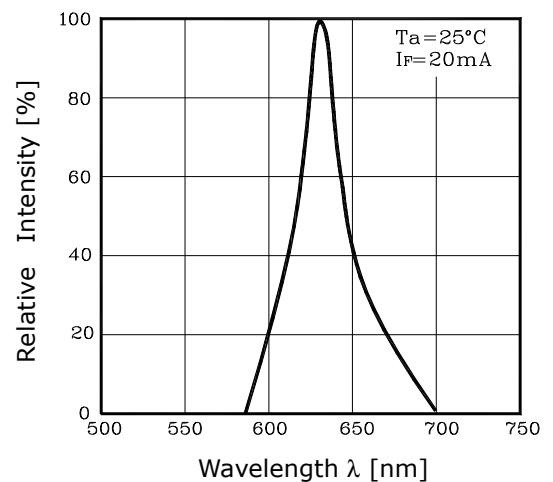


Fig. 5-1 Radiation Diagram(X)

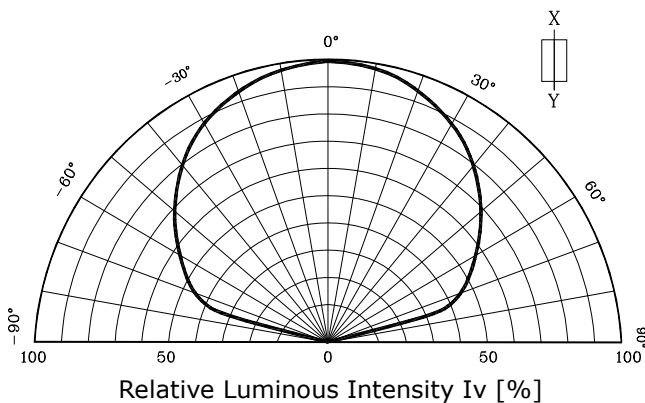
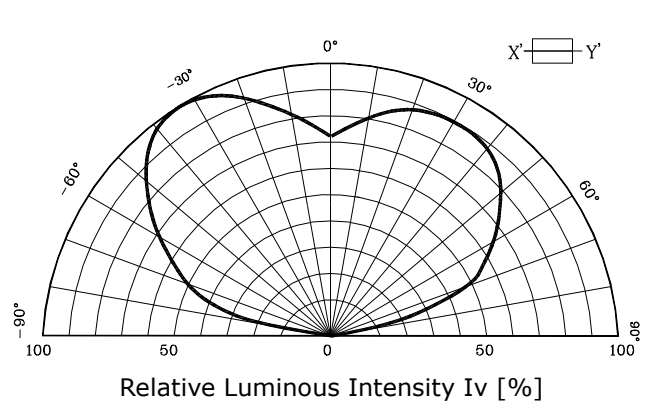


Fig. 5-2 Radiation Diagram(Y)



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