

1. Features

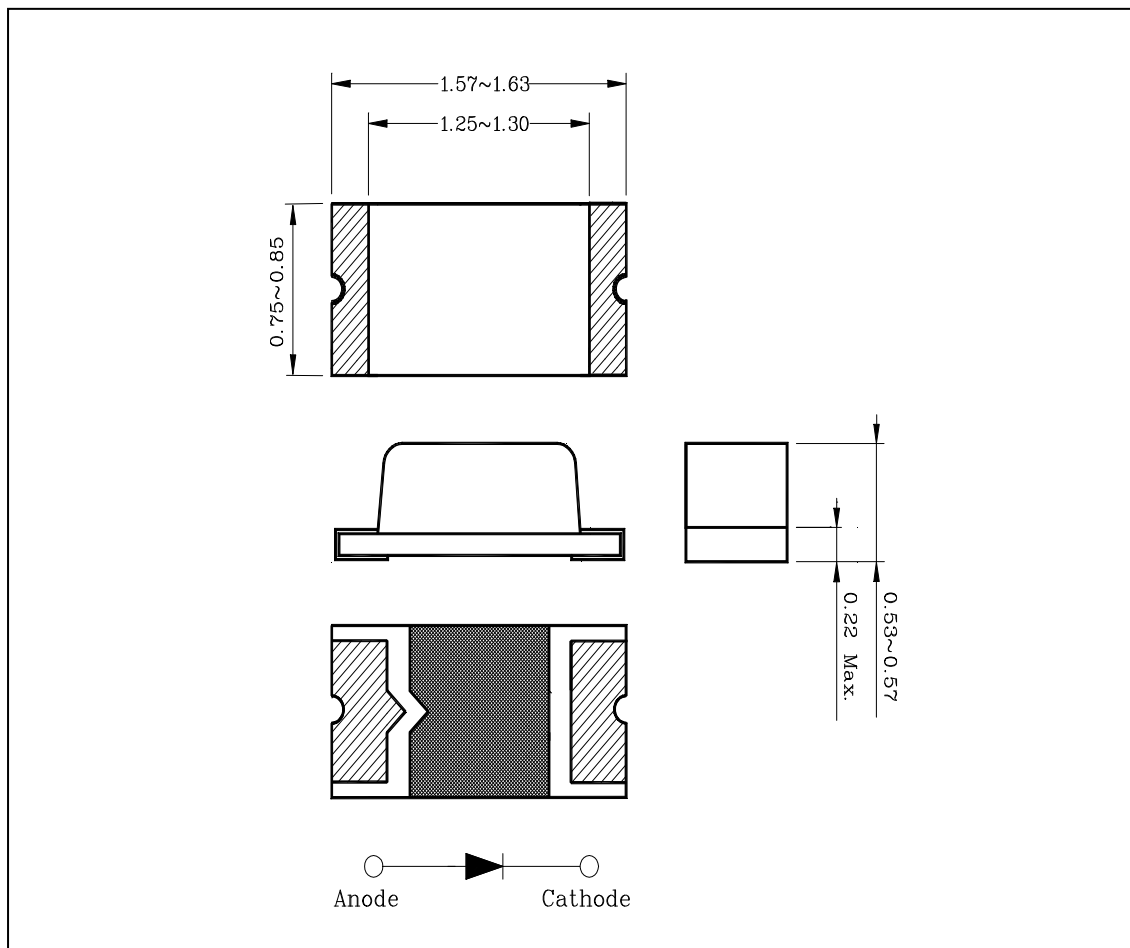
- ◆ 1.6mm(L)×0.8mm small size surface mount type
- ◆ Thin package of 0.55mm(H) thickness
- ◆ Transparent lens type
- ◆ Super luminosity

2. Applications

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

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

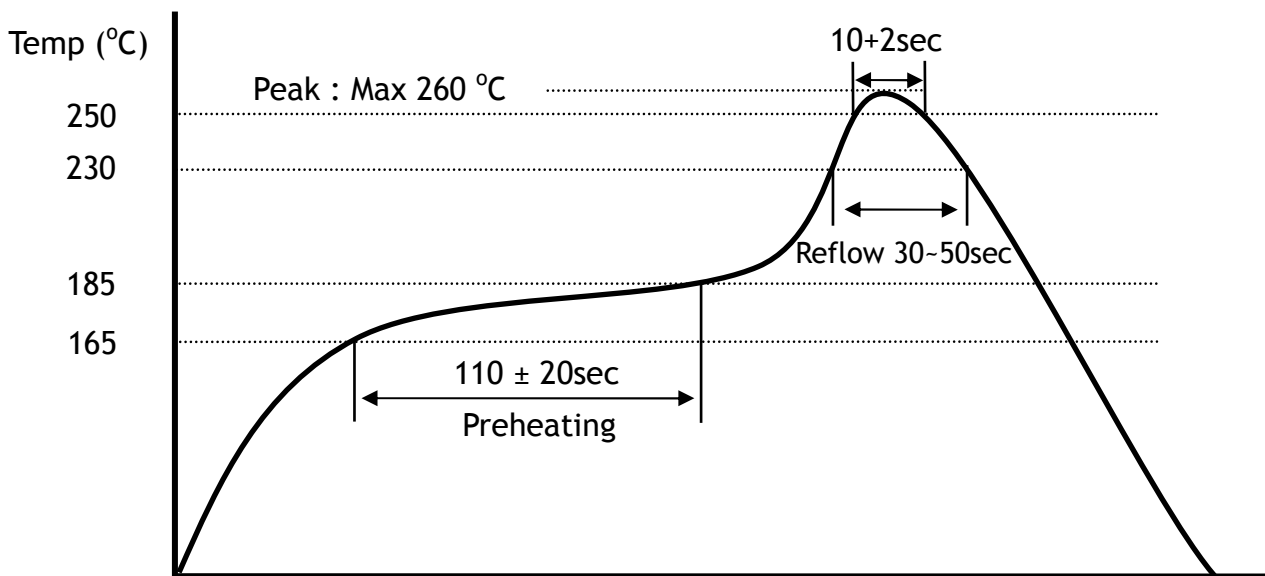
(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Power dissipation	P_D	72	mW
Forward current	I_F	30	mA
*1 Peak forward current	I_{FP}	100	mA
Reverse voltage	V_R	4	V
Operating temperature range	T_{opr}	-30~85	°C
Storage temperature range	T_{stg}	-30~100	°C
*2 Soldering temperature	T_{sol}	260°C for 10 seconds	

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

*2. Recommended reflow soldering temperature profile

- Preheating 165°C to 185°C within 130 seconds soldering 260°C within 10 seconds
- Gradual cooling (Avoid quenching)



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.

5. Electrical / Optical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	V _F	* ³ I _F = 10mA	1.8	-	2.2	V
		I _F = 20mA	1.8	-	2.4	
Luminous intensity	I _V	* ³ I _F = 10mA	21.5	-	47.3	mcd
		I _F = 20mA	27	-	95	
Peak wavelength	λ _P	I _F = 20mA	-	657	-	nm
Dominant wavelength	λ _D	I _F = 20mA	633	-	644	nm
Spectrum bandwidth	Δλ	I _F = 20mA	-	20	-	nm
Reverse current	I _R	V _R =4V	-	-	10	uA
*4 Half angle	θ/2	X	-	±65	-	deg
		Y	-	±70	-	

*3.The test result of I_F=10mA is only for reference

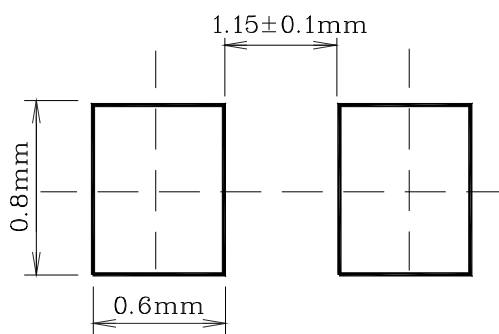
*4.θ/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

*3.Forward Voltage& Luminous Intensity Classification(Test condition @ IF=10mA, Ta=25°C)

VF[V]	Luminous Intensity[mcd]		
1 : 1.8 ~ 1.9	D : 21.5 ~ 24.2	G : 30.5 ~ 34.2	J: 42.5 ~ 47.3
2 : 1.9 ~ 2.1	E : 24.2 ~ 27.2	H : 34.2 ~ 38.2	
3 : 2.1 ~ 2.2	F : 27.2 ~ 30.5	I : 38.2 ~ 42.5	

(Each V_F, I_V range did not consider a margin. Please refer to ±0.1V of V_F range, ±18% of I_V range as a permitted limit and do not use to combine grade classification. It must be used separately grade classification)

* Recommended Soldering Land Pattern



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.

6. Characteristic Diagrams

Fig. 1 $I_F - V_F$

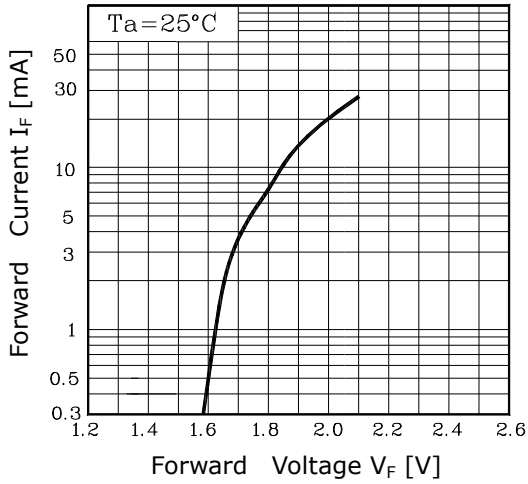


Fig. 2 $I_V - I_F$

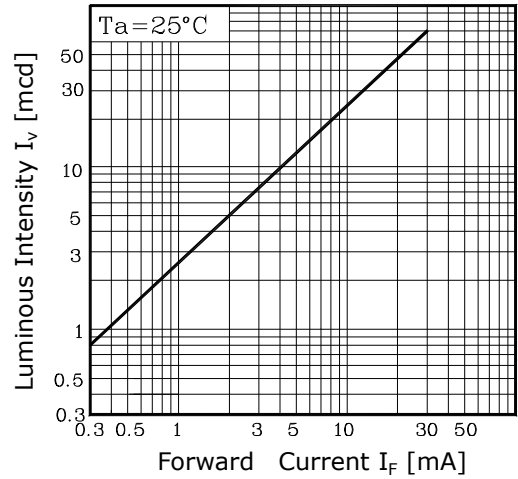


Fig. 3 $I_F - T_a$

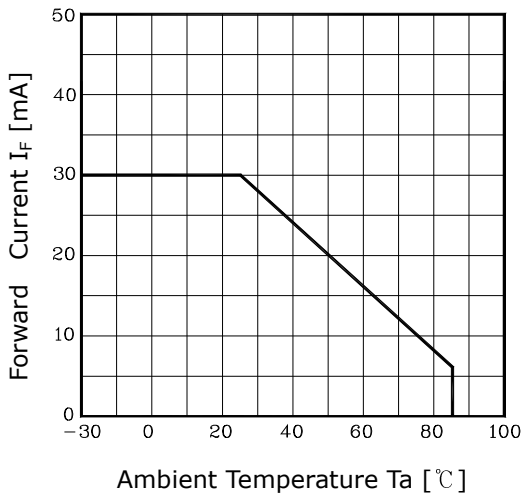


Fig.4 Spectrum Distribution

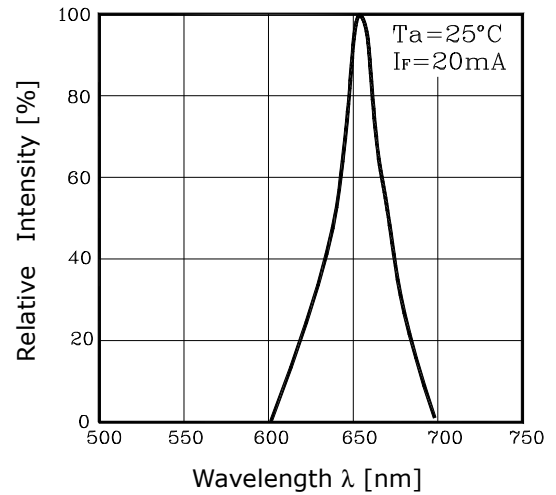


Fig. 5-1 Radiation Diagram(X)

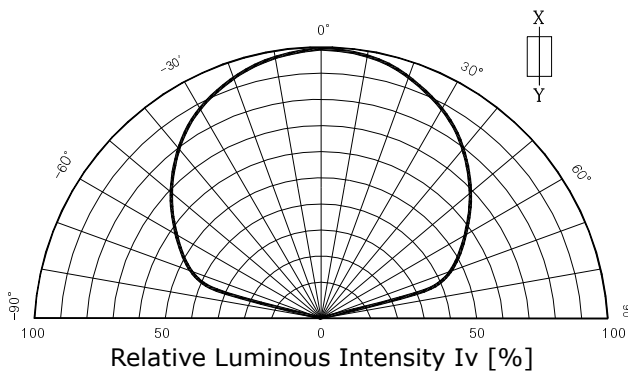
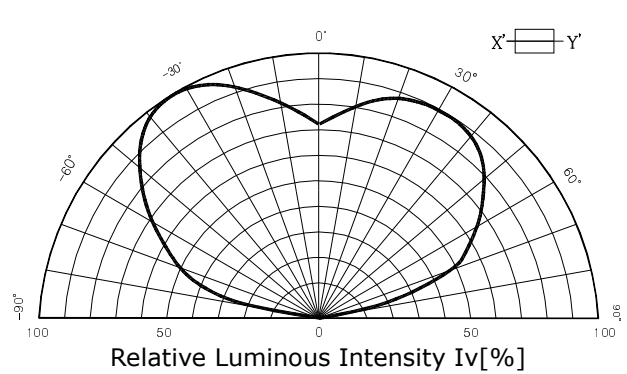


Fig. 5-2 Radiation Diagram(Y)



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.