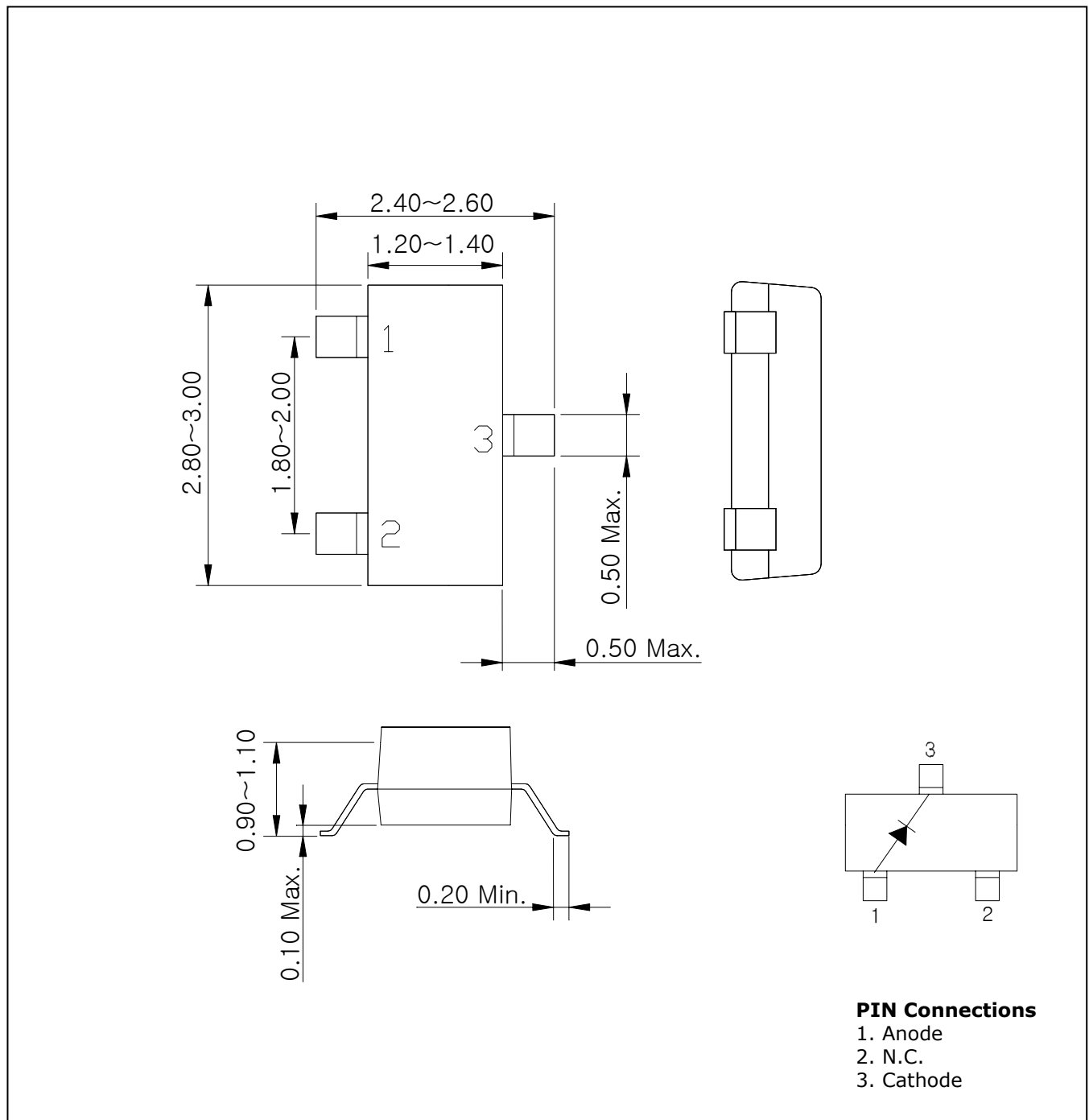


**Features**

- Colorless diffusion lens type
- Compact type
- Radiation size 2.9mm(L)×1.3mm(W) surface mount type.
- **ESD Protected ( $\pm 2.0\text{KV}$ , 3 Times @100pF, 1.5K $\Omega$ )**

**Outline Dimensions**

unit : mm



## Absolute Maximum Ratings

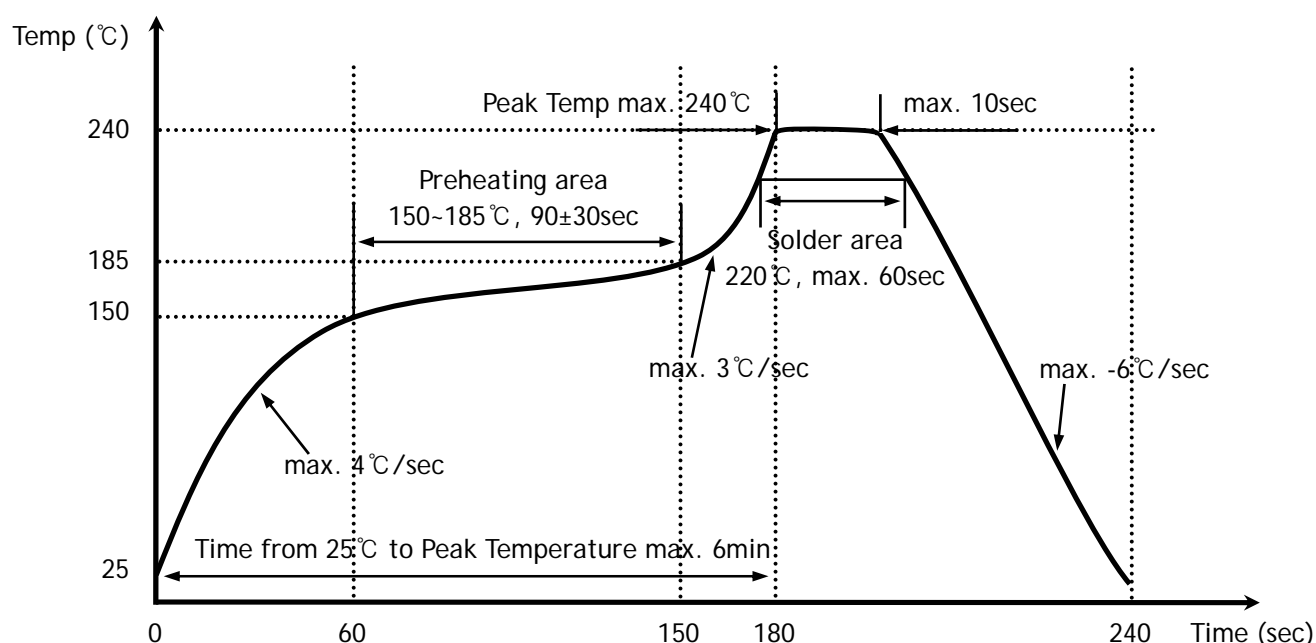
(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Power dissipation	$P_D$	85	mW
Forward current	$I_F$	20	mA
* <sup>1</sup> 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
* <sup>2</sup> 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)



## Electrical / Optical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F= 10mA$	-	3.6	4.2	V
* <sup>3</sup> Luminous intensity	$I_V$	$I_F= 10mA$	10	-	36	mcd
Peak wavelength	$\lambda_P$	$I_F= 10mA$	-	470	-	nm
Spectrum bandwidth	$\Delta_\lambda$	$I_F= 10mA$	-	26	-	nm
Reverse current	$I_R$	$V_R=4V$	-	-	10	uA
* <sup>4</sup> Half angle	$\theta_{1/2}$	$I_F= 10mA$	-	±55	-	deg
			-	±80	-	deg

- \*4.  $\theta_{1/2}$  is the off-axis angle where the luminous intensity is 1/2 the peak intensity
- \*3. Luminous intensity maximum tolerance for each grade classification limit is  $\pm 18\%$
- \*3. Luminous Intensity Classification

G	H
10~23	23~36

Characteristic Diagrams

Fig. 1  $I_F - V_F$

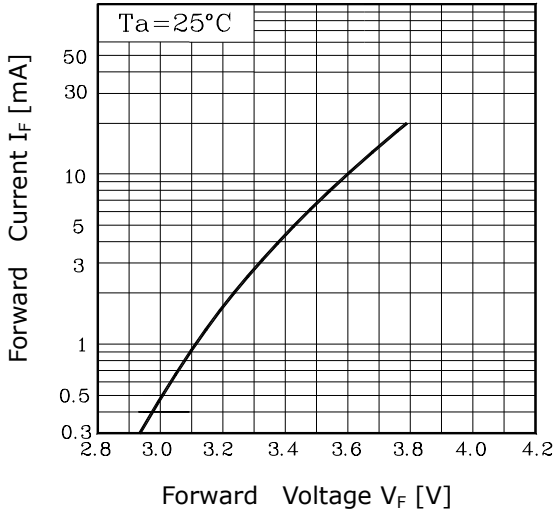


Fig. 2  $I_V - I_F$

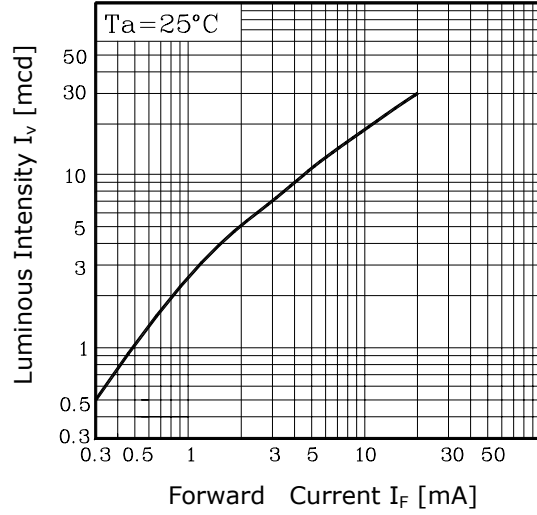


Fig. 3  $I_F - T_a$

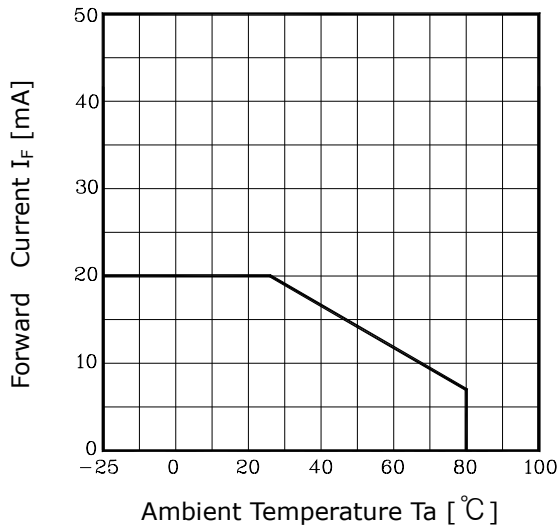


Fig.4 Spectrum Distribution

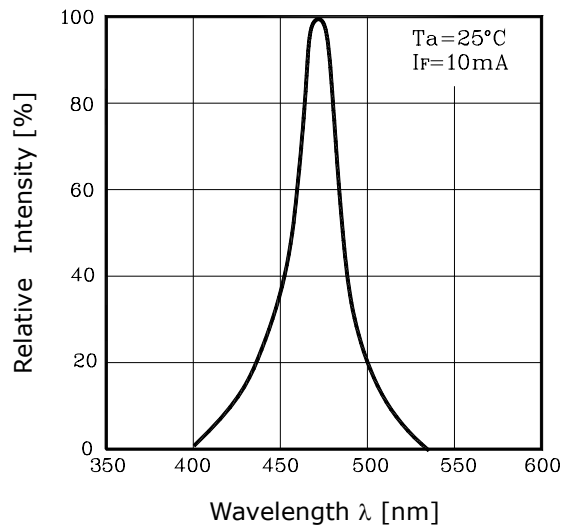


Fig. 5-1 Radiation Diagram(X)

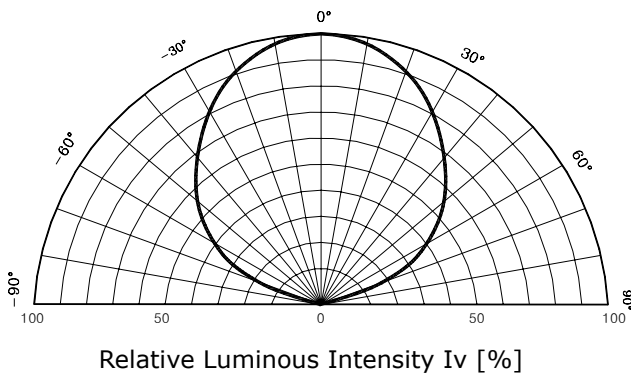
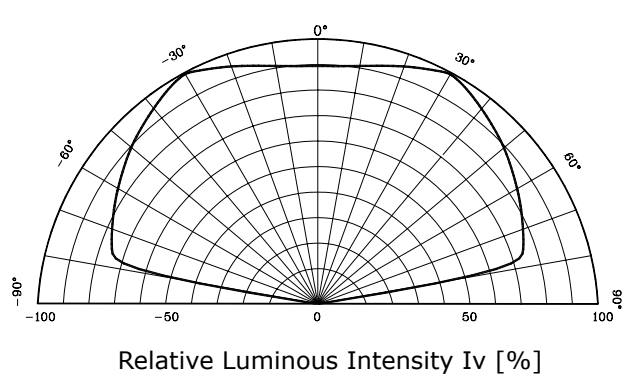


Fig. 5 Radiation Diagram



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