

Features

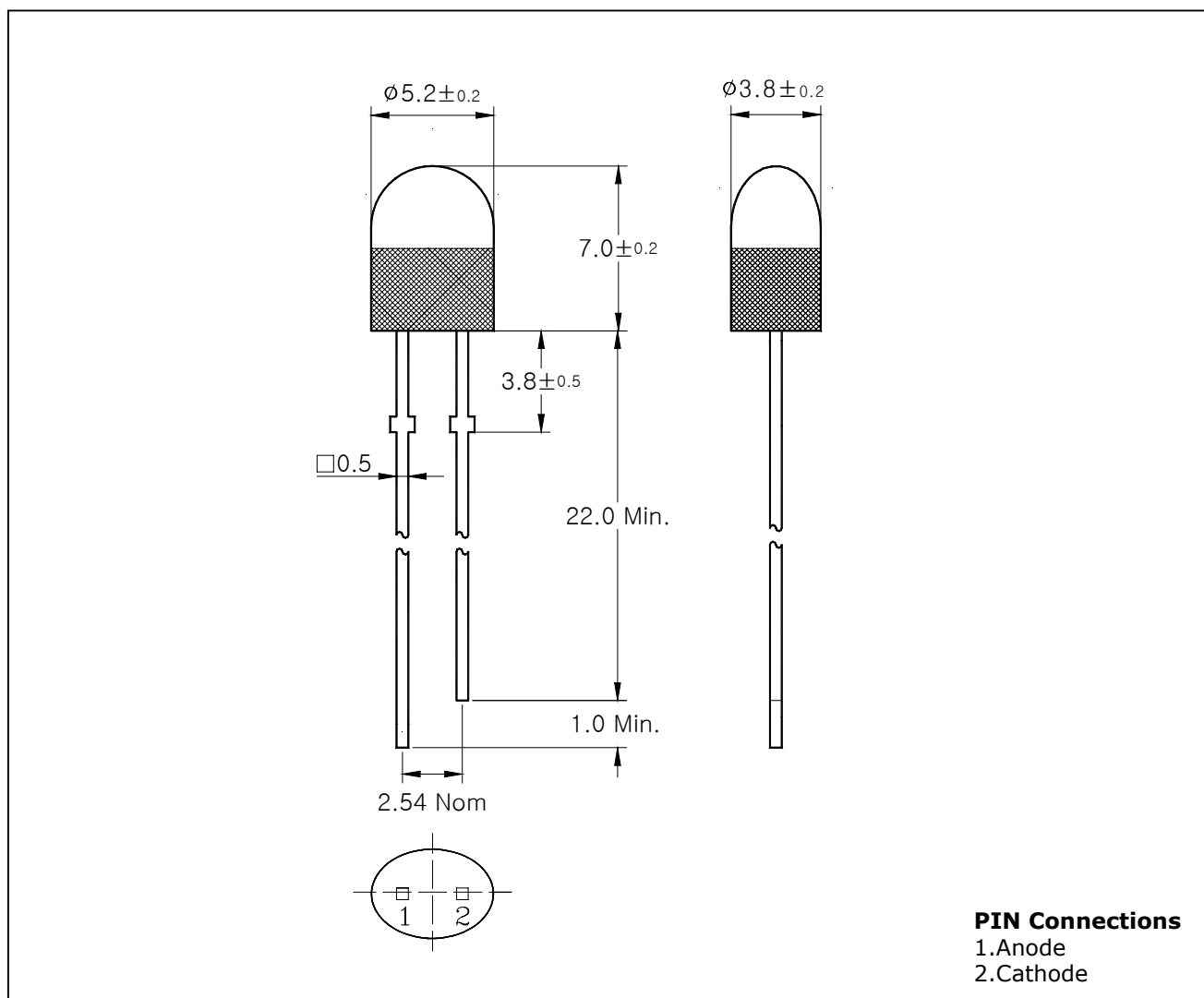
- Red Colored diffusion lens type
- Ellipse type($X=5.2\text{mm}$, $Y=3.8\text{mm}$)
- Super luminosity
- Flangeless package
- High power LEDs
- Oval shape
- Lens Color : Red(Diffusion Type)
- Half Angle($2\theta_{\frac{1}{2}}$) : 110° / 40°)

Application

- Full color displays
- Message boards
- Variable message signs(VMS)

Outline Dimensions

unit : mm

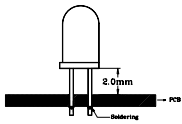


Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Power Dissipation	P_D	120	mW
Forward Current	I_F	40	mA
* ¹ Peak Forward Current	I_{FP}	50	mA
Reverse Voltage	V_R	3	V
Operating Temperature	T_{opr}	-20 ~ 85	°C
Storage Temperature	T_{stg}	-30 ~ 100	°C
* ² Soldering Temperature	T_{sol}	260°C for 5 seconds	

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

*2.Keep the distance more than 2.0mm from PCB to the bottom of LED package

**Electrical Characteristics**

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	-	2.1	2.8	V
* ⁴ Luminous Intensity	I_V	$I_F = 20\text{mA}$	155	350	780	mcd
Peak Wavelength	λ_P	$I_F = 20\text{mA}$	-	630	-	nm
Spectrum Bandwidth	$\Delta \lambda$	$I_F = 20\text{mA}$	-	17	-	nm
Reverse Current	I_R	$V_R = 4\text{V}$	-	-	10	uA
* ³ Half Angle	$\theta_{1/2}$	$I_F = 20\text{mA}$	-	± 55	-	deg
			-	± 20	-	

*3. $\theta_{1/2}$ is the off-axis angle where the luminous intensity is 1/2 the peak intensity

*4. Luminous Intensity Maximum tolerance for each Grade Classification limit is $\pm 18\%$

*4. Luminous Intensity classification

M	N	O	P
155~230	230~350	350~520	520~780

Characteristic Diagrams

Fig. 1 $I_F - V_F$

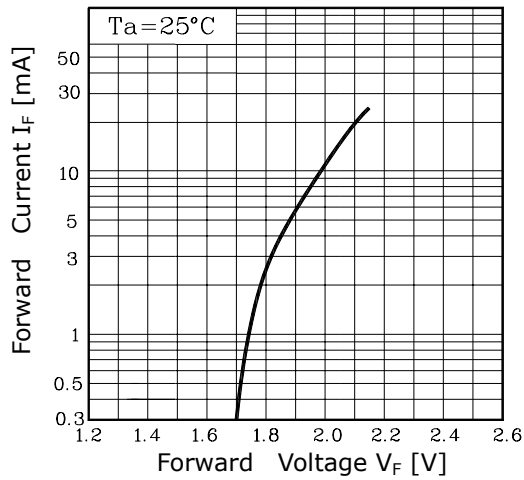


Fig. 2 $I_V - I_F$

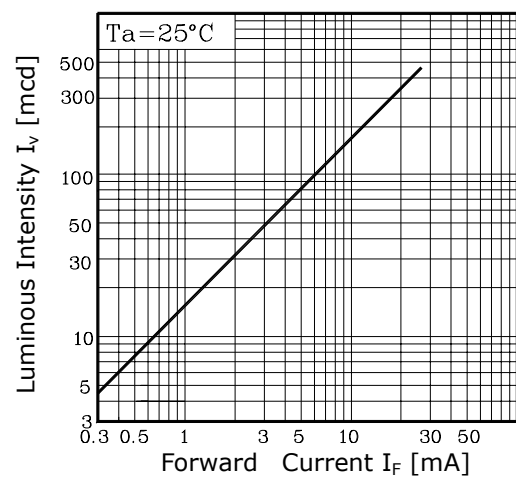


Fig. 3 $I_F - T_a$

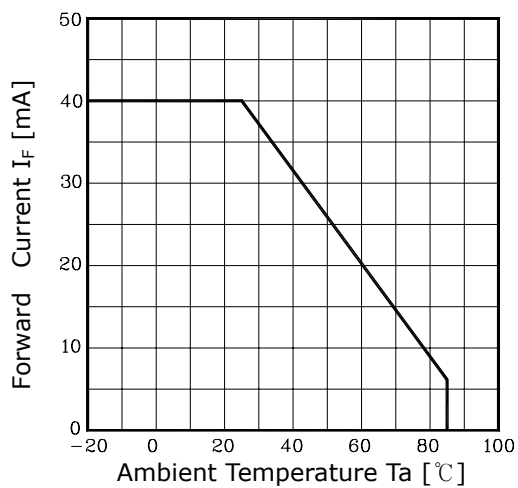


Fig.4 Spectrum Distribution

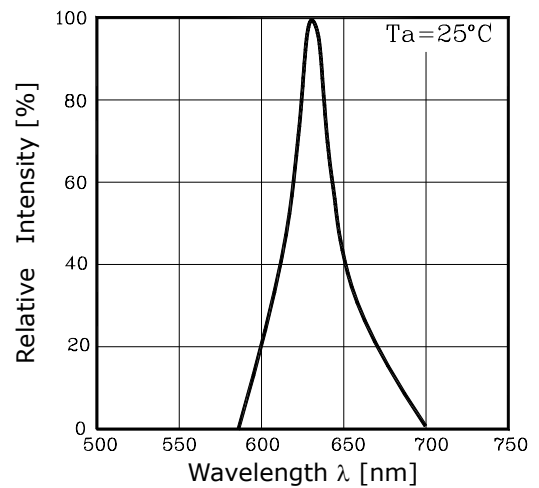


Fig. 5-1 Radiation Diagram(X)

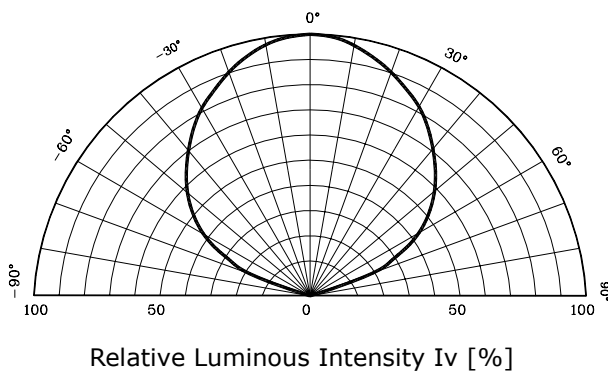
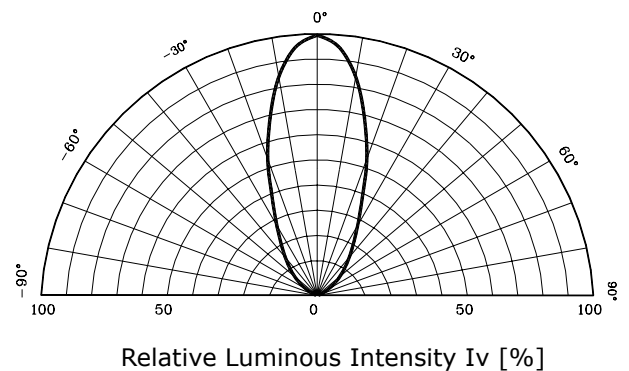


Fig. 5-2 Radiation Diagram(Y)



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