

**Features**

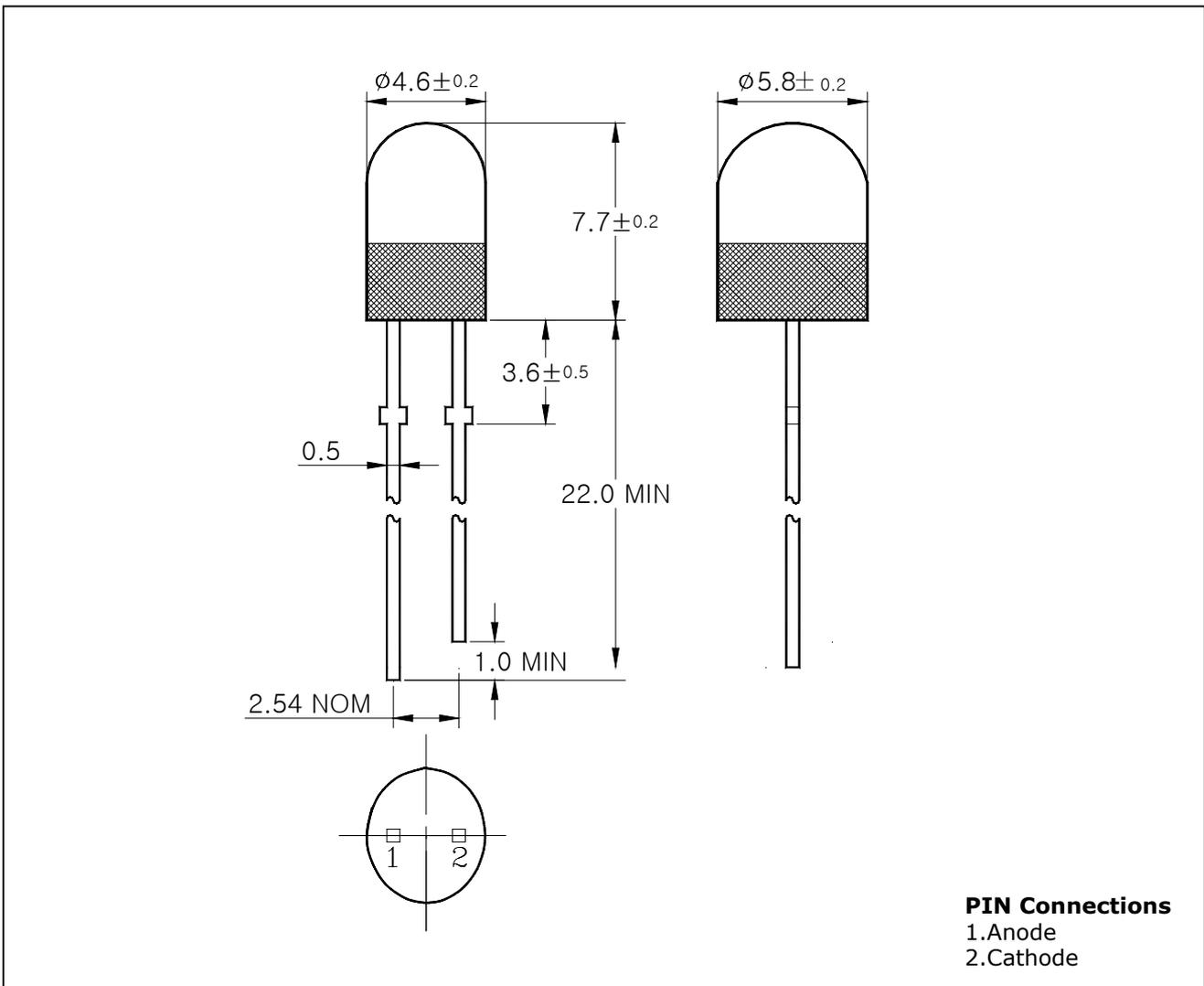
- Red Colored lens type
- Ellipse type(X=4.6mm, Y=5.8mm)
- Super luminosity
- Flangeless package
- High power LEDs
- Oval shape
- Lens Color : Red
- View Angle : 70° / 34°

**Application**

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

**Outline Dimensions**

unit : mm



## Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Power Dissipation	$P_D$	110	mW
Forward Current	$I_F$	40	mA
* <sup>1</sup> Peak Forward Current	$I_{FP}$	50	mA
Reverse Voltage	$V_R$	4	V
Operating Temperature	$T_{opr}$	-25 ~ 85	°C
Storage Temperature	$T_{stg}$	-30 ~ 100	°C
* <sup>2</sup> 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	$V_F$	$I_F = 20\text{mA}$	1.8	2.1	2.5	V
* <sup>4</sup> Luminous Intensity	$I_V$	$I_F = 20\text{mA}$	780	1365	2640	mcd
Peak Wavelength	$\lambda_P$	$I_F = 20\text{mA}$	-	630	-	nm
Spectrum Bandwidth	$\Delta \lambda$	$I_F = 20\text{mA}$	-	17	-	nm
Reverse Current	$I_R$	$V_R = 4\text{V}$	-	-	10	uA
* <sup>3</sup> Half Angle	$\theta_{1/2}$	$I_F = 20\text{mA}$	-	±17	-	deg
	X Y		-	±35	-	

\*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 ±18%

\*4. Luminous Intensity classification

Q	R	S
780~1170	1170~1760	1760~2640

Characteristic Diagrams

Fig. 1  $I_F - V_F$

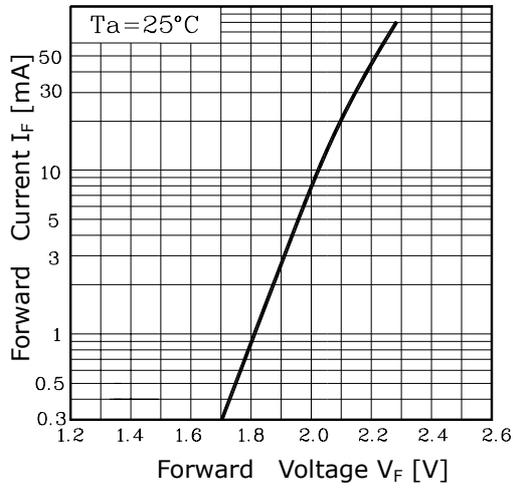


Fig. 2  $I_V - I_F$

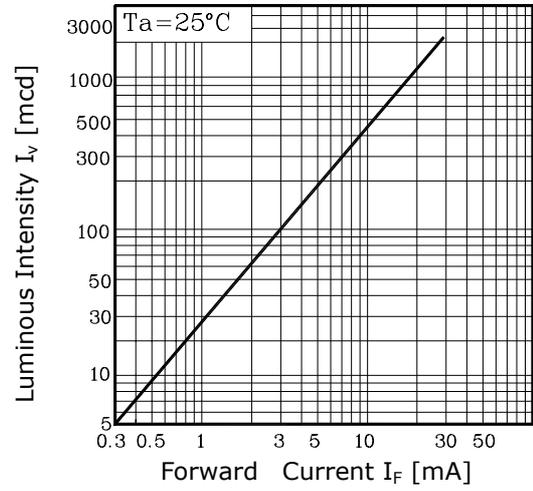


Fig. 3  $I_F - T_a$

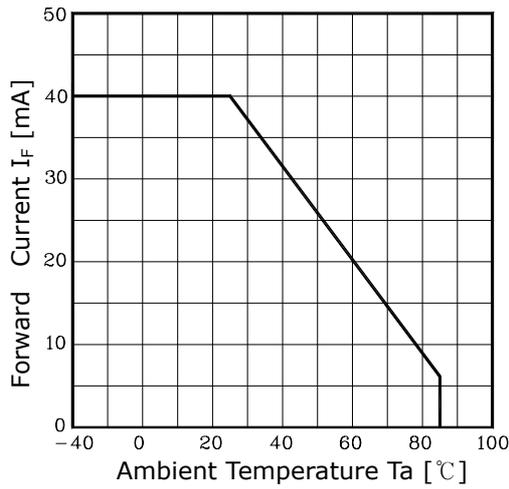


Fig. 4 Spectrum Distribution

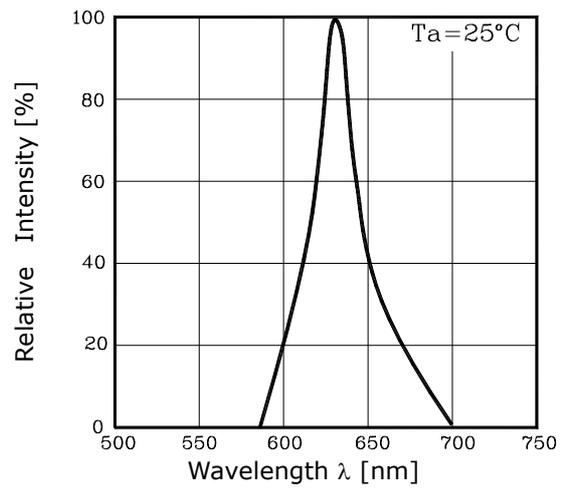


Fig. 5-1 Radiation Diagram(X)

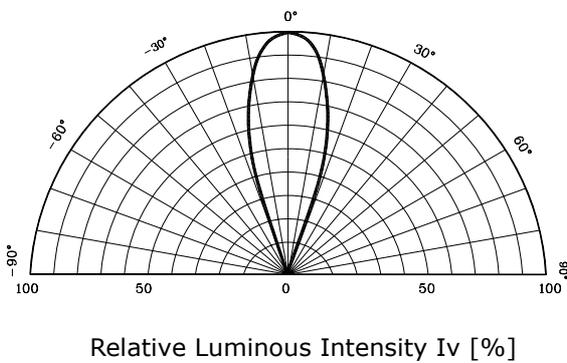
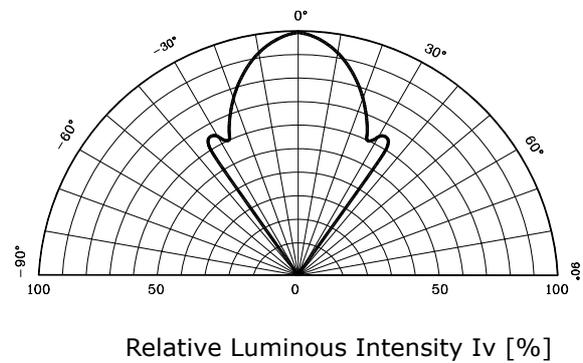


Fig. 5-2 Radiation Diagram(Y)



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