

**IRED** 

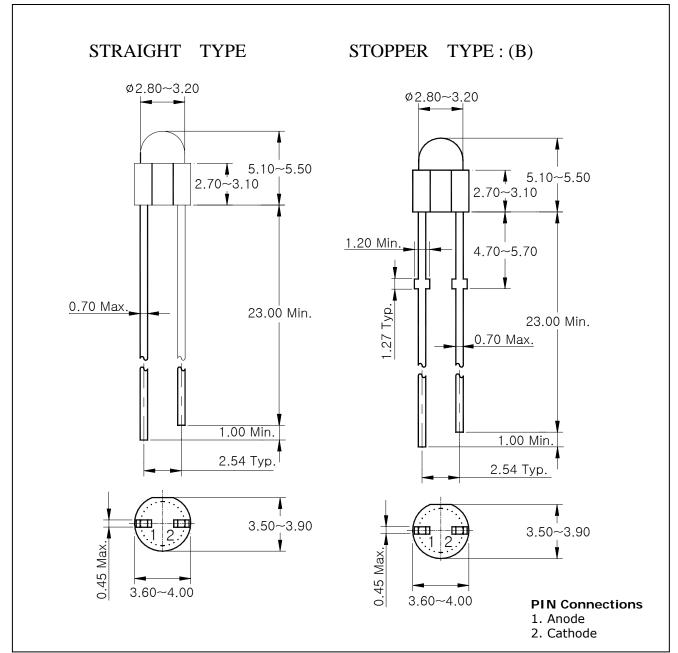
#### **Features**

- Colorless transparency lens type
- \$\phi 3mm(T-1) all plastic mold type
- Low power consumption
- High radiant intensity

#### **Applications**

• Light source for remote control devices (This device should be only used at non- repetitive pulse mode)

Outline Dimensions unit: mm



KSD-O2B044-002

### **Absolute Maximum Ratings**

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Power dissipation	P <sub>D</sub>	145	mW
*1Forward current	${ m I}_{\sf F}$	100	mA
* <sup>2</sup> Peak forward current	$I_{FP}$	1	Α
Reverse voltage	$V_R$	4	V
Operating temperature range	T <sub>opr</sub>	-25~85	$^{\circ}$
Storage temperature range	T <sub>stg</sub>	-30~100	$^{\circ}$
*3Soldering temperature	T <sub>sol</sub>	260 $^{\circ}$ for 10 seconds	

<sup>\*1.</sup> Avoid operating under continuous bias

### **Electrical / Optical Characteristics**

 $(Ta=25^{\circ}C)$ 

Characteristic	Symbol	<b>Test Condition</b>	Min.	Typ.	Max.	Unit
Forward voltage	$V_{F}$	$I_F = 50mA$	-	1.3	1.5	V
Radiant intensity	${ m I}_{ m E}$	$I_F = 50mA$	12	25	-	mW/Sr
Peak wavelength	$\lambda_{P}$	$I_F = 50mA$	-	950	-	nm
Spectrum bandwidth	$\Delta_{\lambda}$	$I_F = 50mA$	-	50	-	nm
Reverse current	$I_{R}$	$V_R=4V$	-	-	10	uA
* <sup>4</sup> Half angle	$\theta^1/_2$	$I_F = 50mA$	-	±22	-	deg

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

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<sup>\*2.</sup>Duty ratio = 1/100, Pulse width = 0.1ms

<sup>\*3.</sup>Keep the distance more than 2.0mm from PCB to the bottom of IRED package

### **Characteristic Diagrams**

Fig. 1  $I_F$  -  $V_F$ 

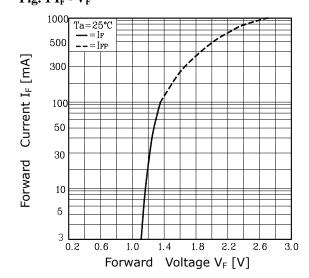


Fig. 2  $I_E$  -  $I_F$ 

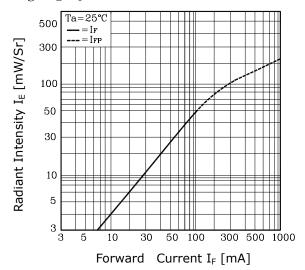


Fig.  $3 I_F - Ta$ 

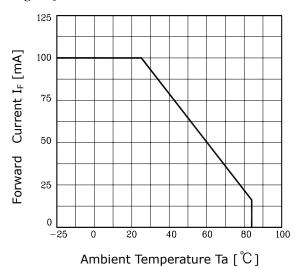


Fig.4 Spectrum Distribution

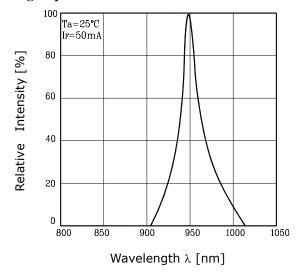
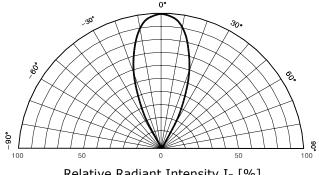


Fig. 5 Radiation Diagram



Relative Radiant Intensity I<sub>E</sub> [%]

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