AUK Semiconductor

SI5413-H / SI5413-H(B)

IRED

Features

- Purple Colored transparency lens type
- ϕ5mm(T-1 3/4) all plastic mold type
- Low power consumption
- High radiant intensity

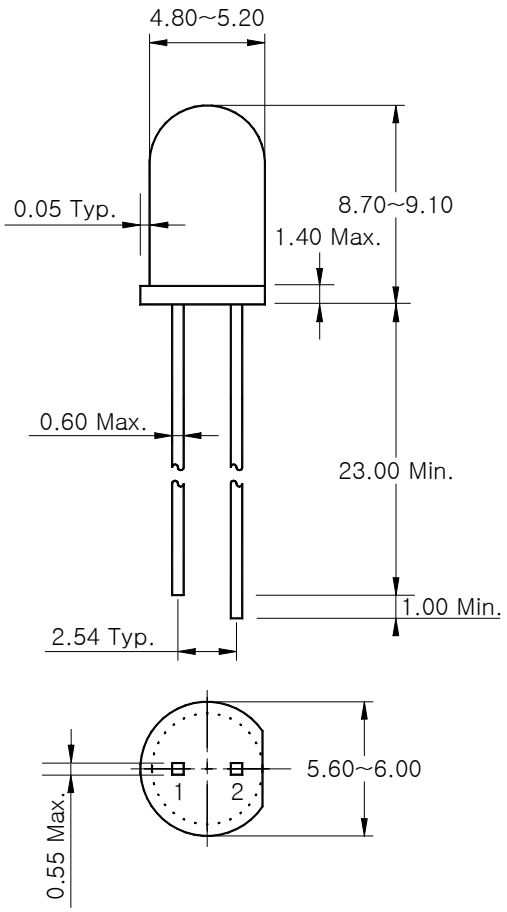
Applications

- Infrared remote control and free air transmission systems with low forward voltage and comfortable radiation angle requirements in combination with PIN photodiodes or phototransistors.

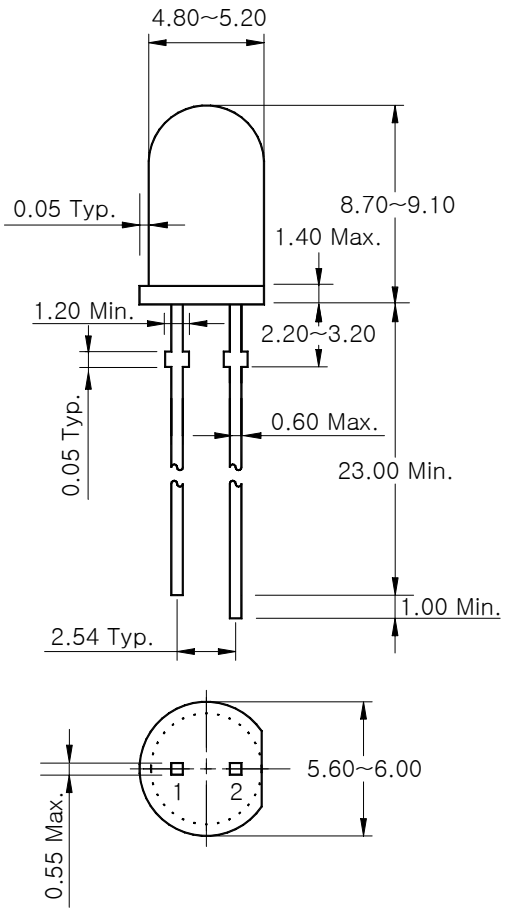
Outline Dimensions

unit : mm

STRAIGHT TYPE



STOPPER TYPE : (B)



PIN Connections
1. Cathoe
2. Anode

Absolute Maximum Ratings

(Ta=25℃)

Characteristic	Symbol	Rating	Unit
Power dissipation	P_D	145	mW
Forward current	I_F	100	mA
*[1]Peak forward current	I_{FP}	1	A
Reverse voltage	V_R	4	V
Operating temperature range	T_{opr}	-25～85	℃
Storage temperature range	T_{stg}	-30～100	℃
*[2]Soldering temperature	T_{sol}	260℃ for 10 seconds	

*1.Duty ratio = 1/16, Pulse width = 0.1ms
*2.Keep the distance more than 2.0mm from PCB to the bottom of IRED package

Electrical / Optical Characteristics

(Ta=25℃)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F= 50mA	-	1.3	1.45	V
Radiant intensity	I_E	I_F= 50mA	10	22	-	mW/Sr
Peak wavelength	λ_P	I_F= 50mA	-	950	-	nm
Spectrum bandwidth	$\Delta\lambda$	I_F= 50mA	-	50	-	nm
Reverse current	I_R	V_R=4V	-	-	10	uA
*[3]Half angle	$\theta^1/_2$	I_F= 50mA	-	±30	-	deg

*3. θ1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

Characteristic Diagrams

Fig. 1 I_F - V_F

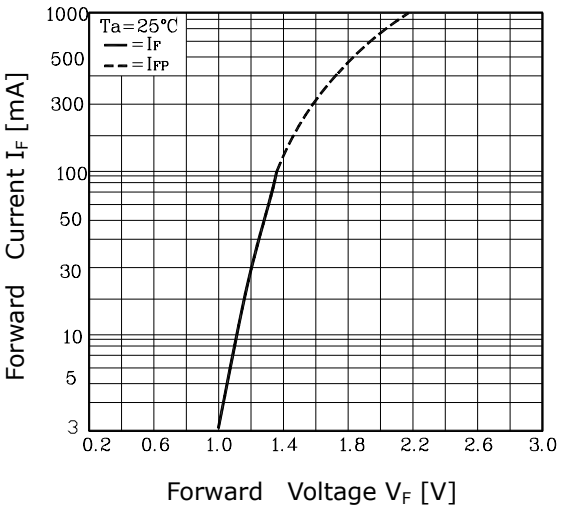


Fig. 2 I_E - I_F

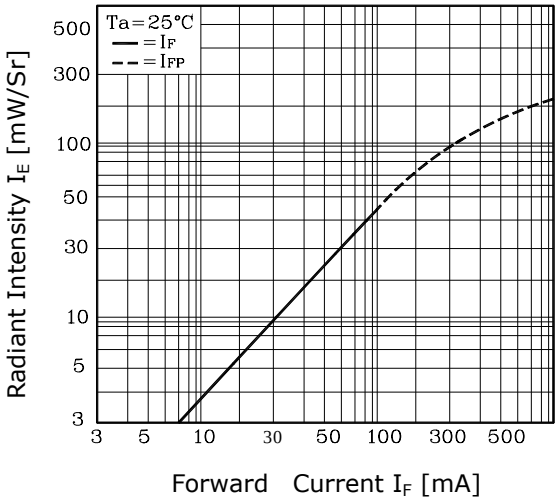


Fig. 3 I_F – Ta

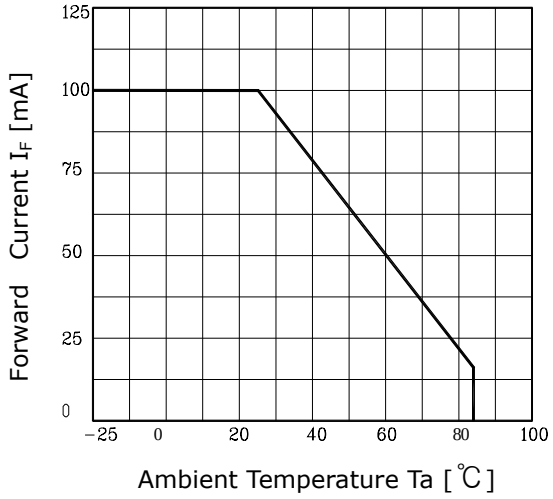


Fig.4 Spectrum Distribution

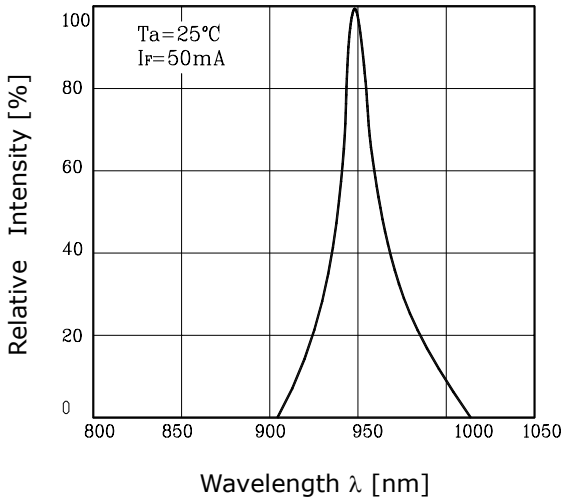
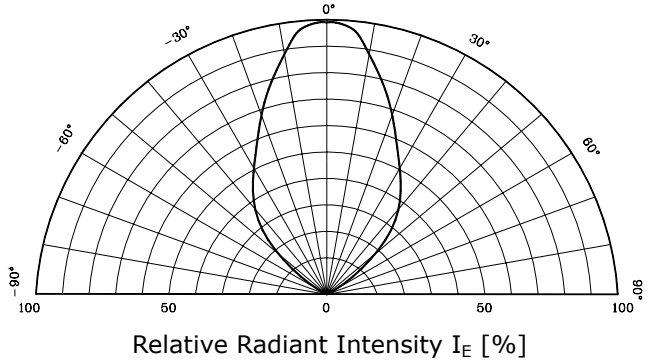


Fig. 5 Radiation Diagram



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