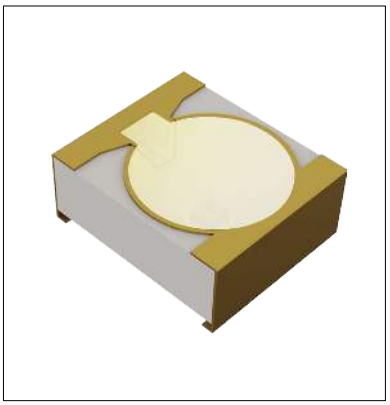
Surface Mount High Output Infrared LEDs

SIM-030ST Datasheet

●Applications

- Light source for sensors

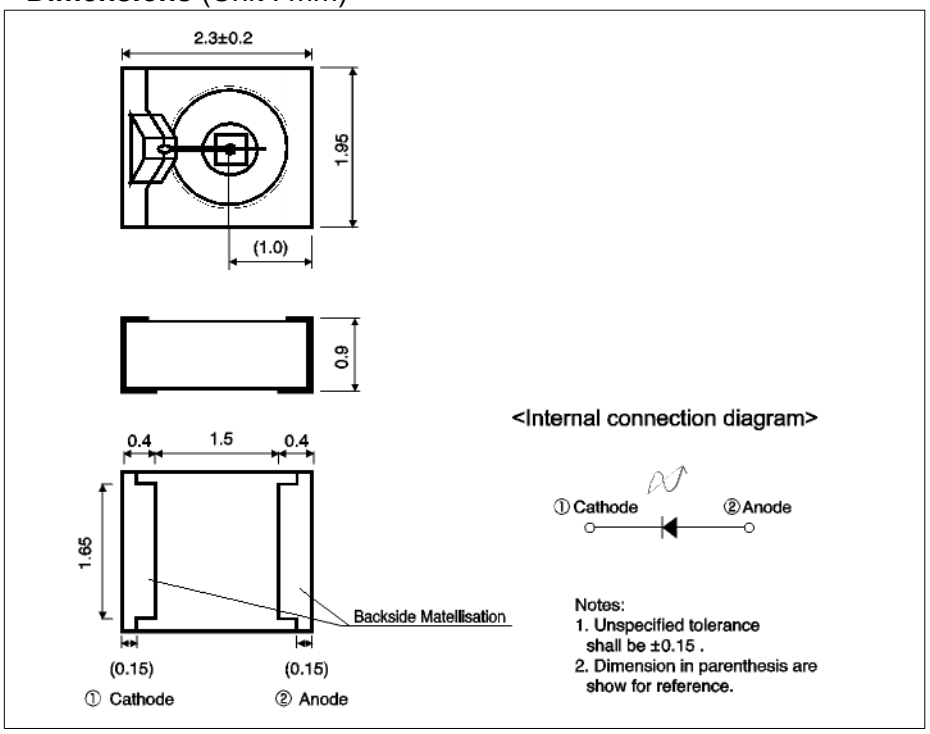
●Outline



●Features

1) Higt compact, low-profile
2) Higt output, over a narrow angle
3) Exellent temperature property
4) Long life,high reliability
5) Original optical tecnology is ultra-high-output surface mount infrared LEDs.

●Dimensions (Unit : mm)



●Absolute maximum ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit
Forward current	I_F	100	mA
Pulse forward current*1	I_{FP}	1	A
Reverse voltage	V_R	5	V
Power dissipation	P_D	180	mW
Operating temperature	T_{opr}	−25 to +85	°C
Storage temperature	T_{stg}	−40 to +85	°C

*1 Pulse width 0.1msec,duty ratio1%

●**Electrical and optical characteristics** (T_a = 25°C)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Forward voltage	V_F	I_F =100mA	-	1.7	2.5	V
Reverse current	I_R	V_R =5V	-	-	15	μA
Peak light emitting wavelength	λ_{peak}	I_F =100mA	-	870	-	nm
Spectral line half width	$\Delta\lambda$	I_F =100mA	-	35	-	nm
View angle	$\theta_{1/2}$	-	-	±20	-	deg.
Radiant intensity	I_E	I_F =100mA	10	-	100	mW/sr

*Non-coherent infrared light emiting diode used.

*This product is not designed to be protected against electromagnetic wave.

●Electrical and optical characteristics curves

Fig.1 Forward Current Falloff

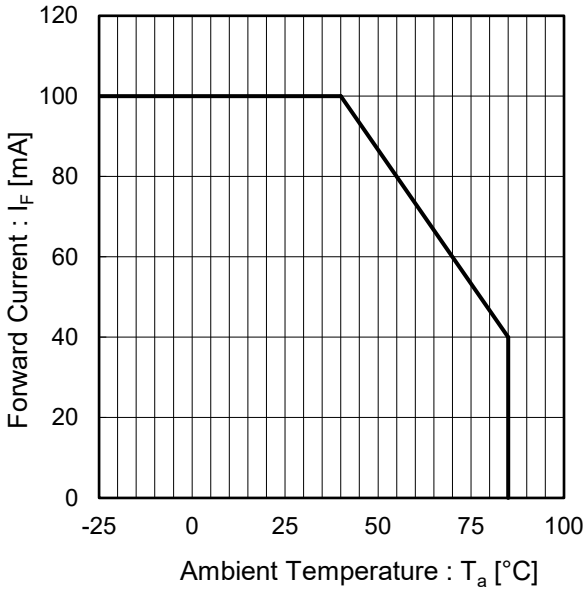


Fig.2 Forward Current vs. Forward Voltage

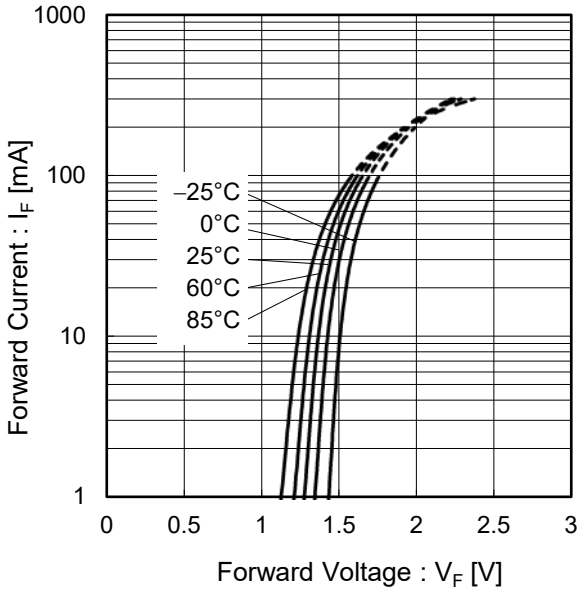


Fig.3 Emitter Strength vs. Forward Current

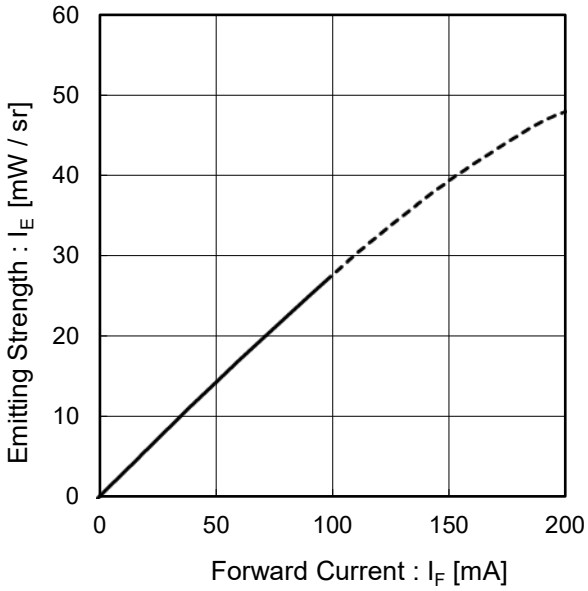
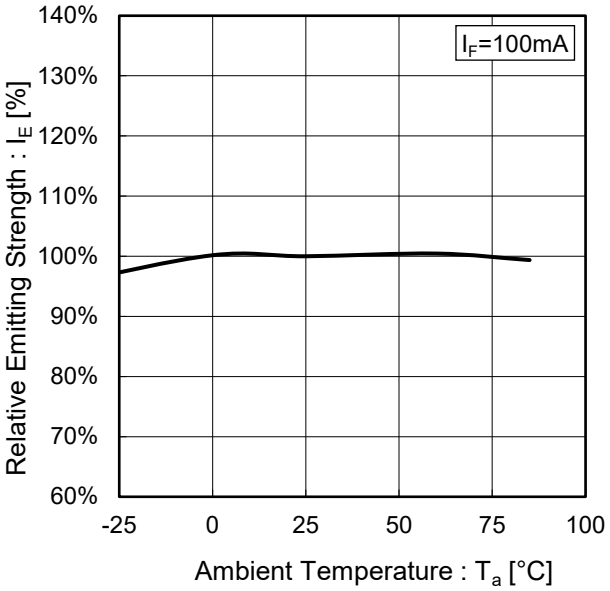


Fig.4 Relative Emitter Strength vs. Ambient Temperature



●Electrical and optical characteristics curves

Fig.5 Spectrum Data

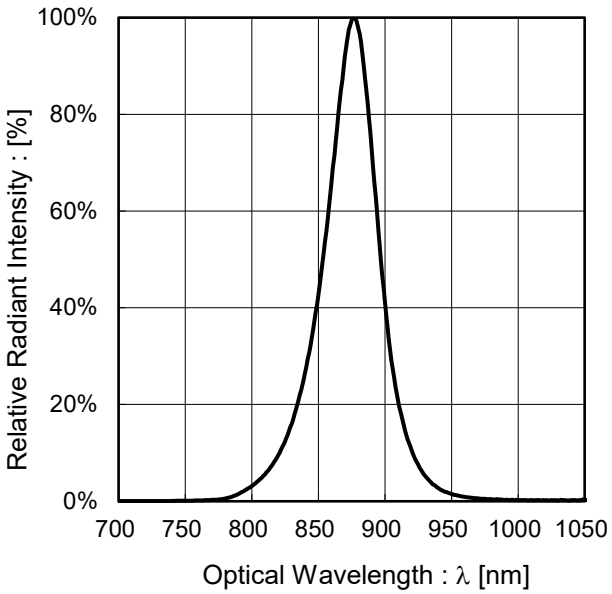


Fig.6 Radiant Intensity

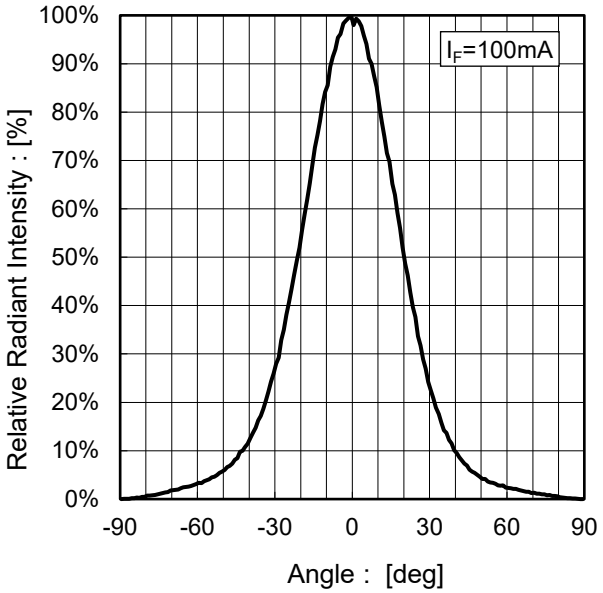
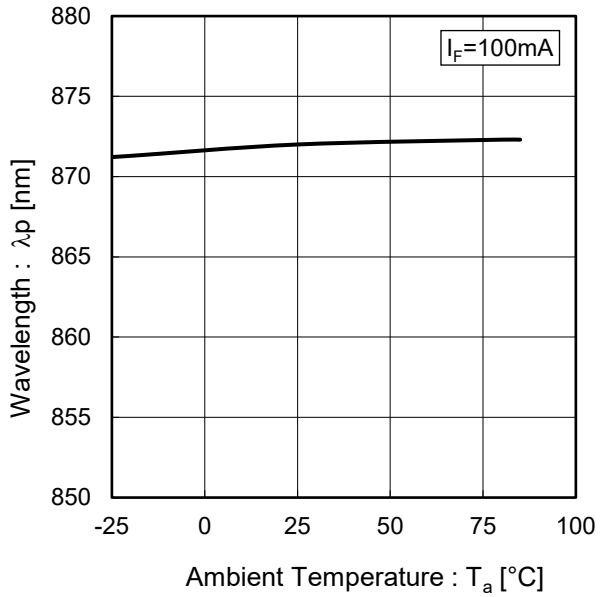


Fig.7 Wavelength vs. Ambient Temperature



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