

Surface Mount High Output Infrared LEDs



Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	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 ratio 1%

Applications

Light source for sensors (proximity sensors, signal transmission applications)

Features

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

Electrical and optical characteristics (Ta=25°C)

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

* Non-coherent infrared light emitting diode used.

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

Electrical and optical characteristics curves

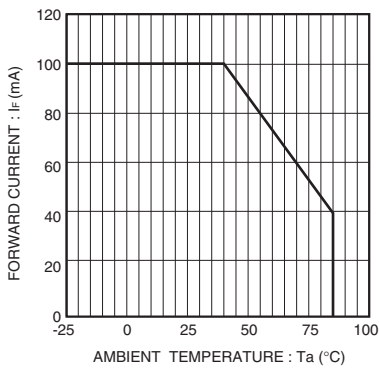


Fig.1 Forward current fall off

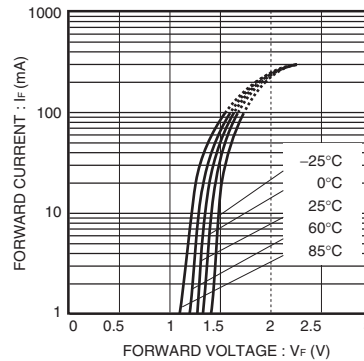


Fig.2 Forward current vs. Forward voltage

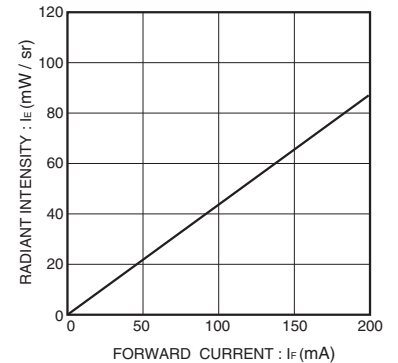


Fig.3 Radiant intensity vs. Forward current

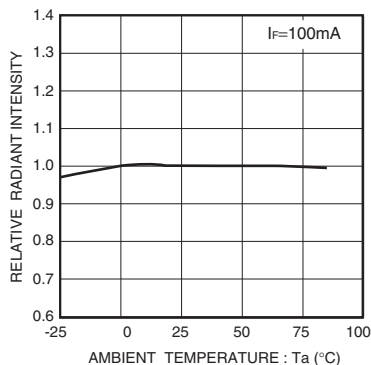


Fig.4 Relative radiant vs. Ambient temperature

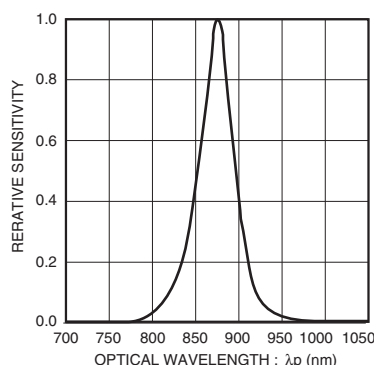


Fig.5 Spectrum data

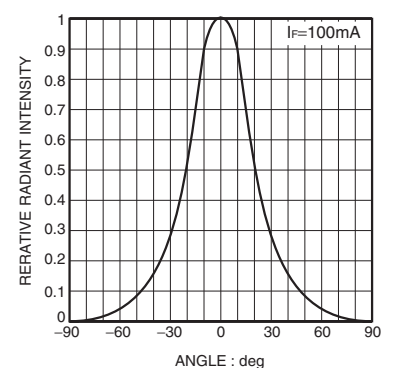


Fig.6 Radiant intensity

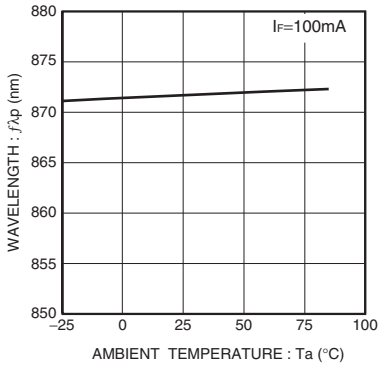
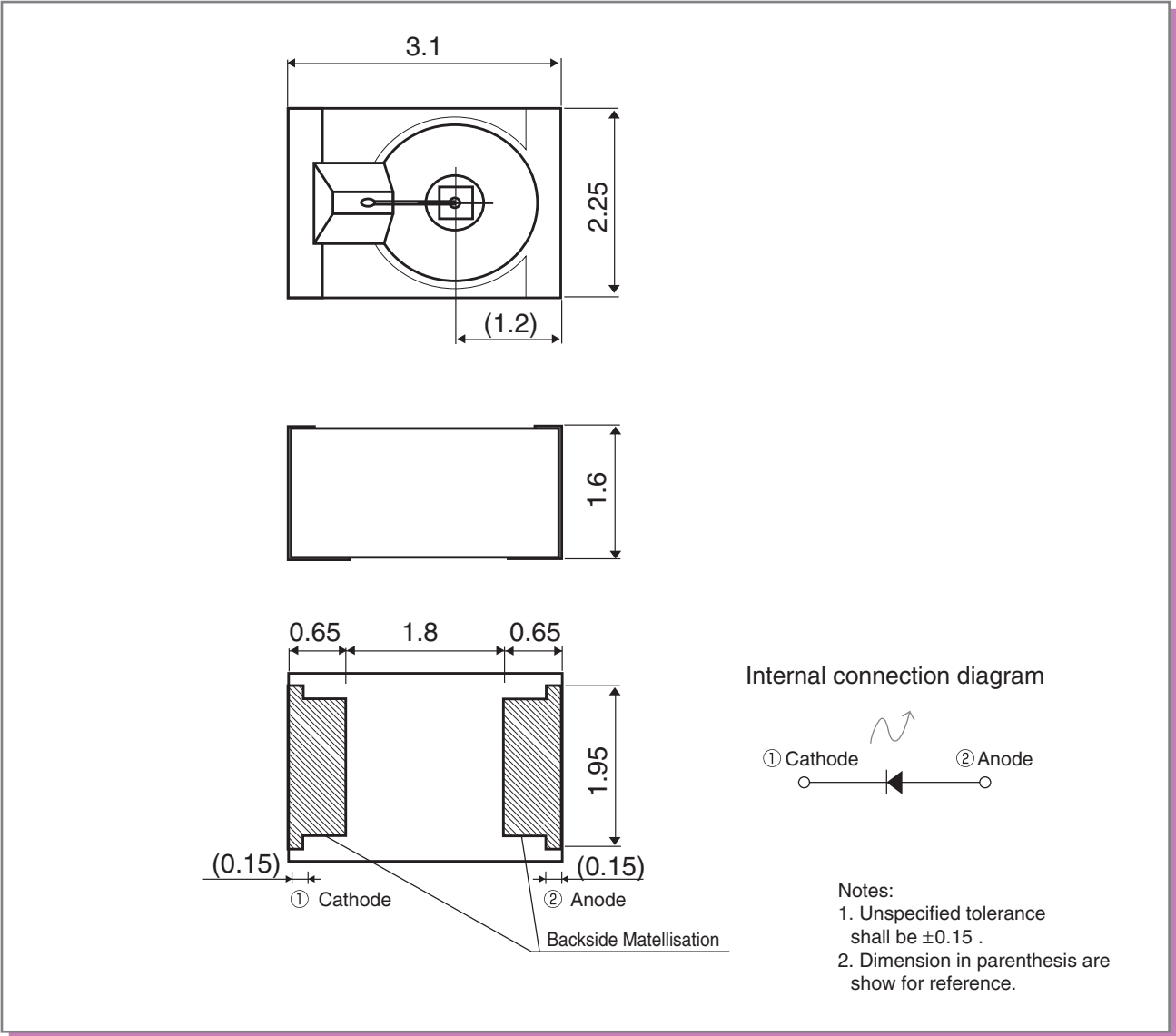


Fig.7 Wavelength vs. Ambient temperature

Notes

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