

## Surface Mount High Output Infrared LEDs



### Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Forward current	I <sub>F</sub>	100	mA
Pulse forward current <sup>*1</sup>	I <sub>FP</sub>	1	A
Reverse voltage	V <sub>R</sub>	5	V
Power dissipation	P <sub>D</sub>	180	mW
Operating temperature	T <sub>opr</sub>	-25 to + 85	°C
Storage temperature	T <sub>stg</sub>	-40 to + 85	°C

\*1 Pulse width 0.1msec,duty ratio1%

### 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 <sub>F</sub>	-	1.7	2.5	V	I <sub>F</sub> =100mA
Reverse current	I <sub>R</sub>	-	-	15	μA	V <sub>R</sub> =5V
Peak light emitting wavelength	λ <sub>peak</sub>	-	870	-	nm	I <sub>F</sub> =100mA
Spectral line half width	Δλ	-	35	-	nm	I <sub>F</sub> =100mA
View angle	θ <sub>1/2</sub>	-	±20	-	deg.	-
Radiant intensity	I <sub>E</sub>	10	-	100	mW/sr	I <sub>F</sub> =100mA

\* Non-coherent infrared light emitting diode used.

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

### Electrical and optical characteristics curves

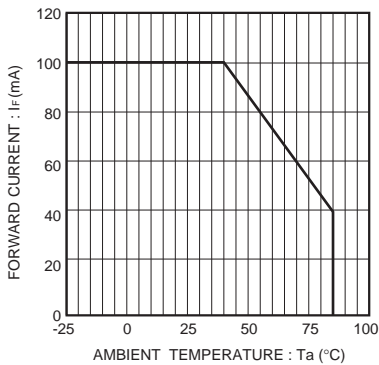


Fig.1 Forward current fall off

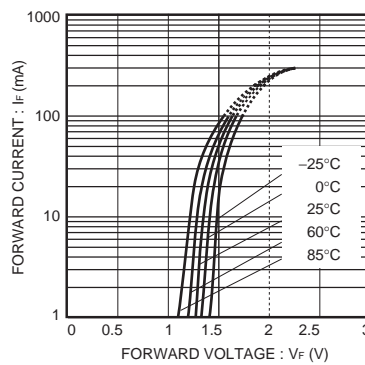


Fig.2 Forward current vs. Forward voltage

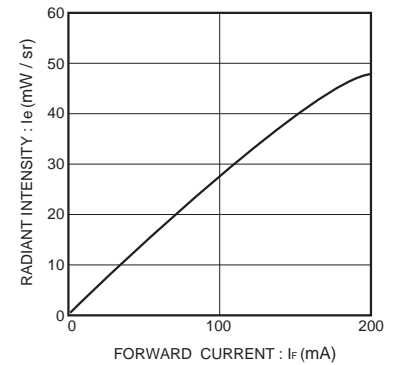


Fig.3 Radiant intensity vs. Forward current

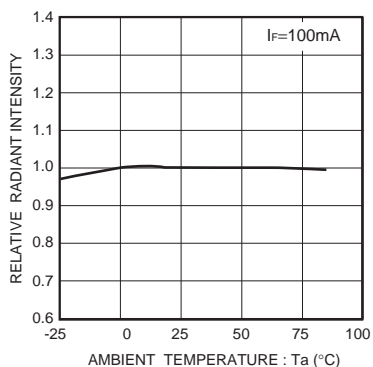


Fig.4 Relative radiant vs. Ambient temperature

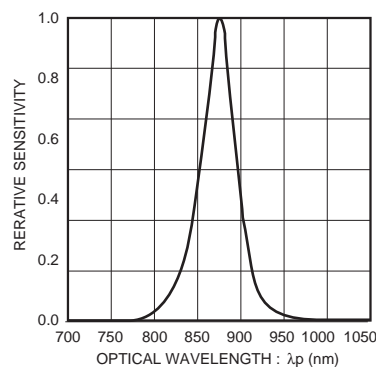


Fig.5 Spectrum data

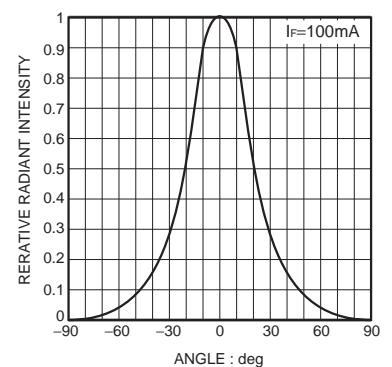
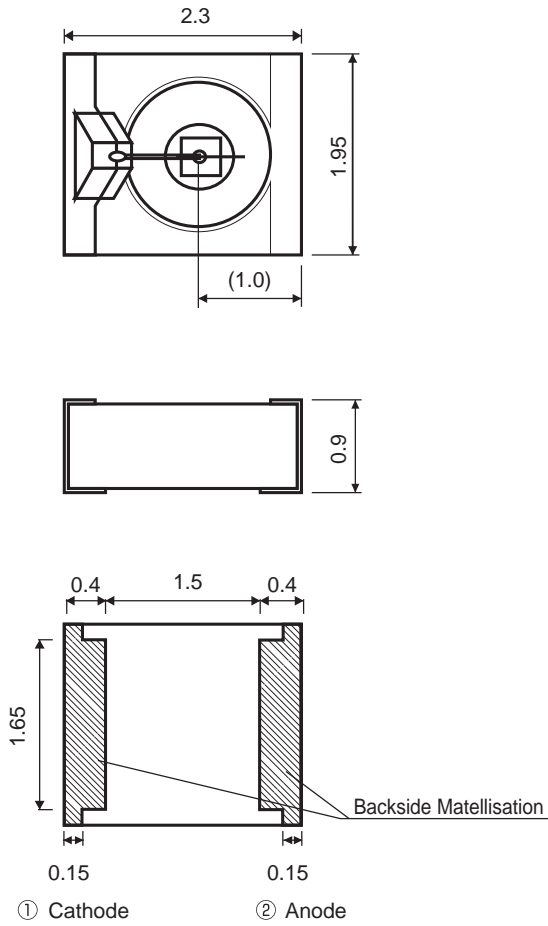


Fig.6 Radiant intensity



Internal connection diagram



Notes:

1. Unspecified tolerance shall be  $\pm 0.15$ .
2. Dimension in parenthesis are show for reference.

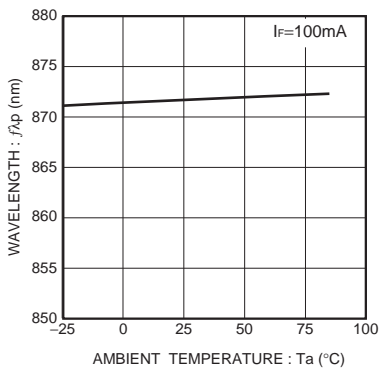


Fig.7 Wavelength vs. Ambient temperature

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