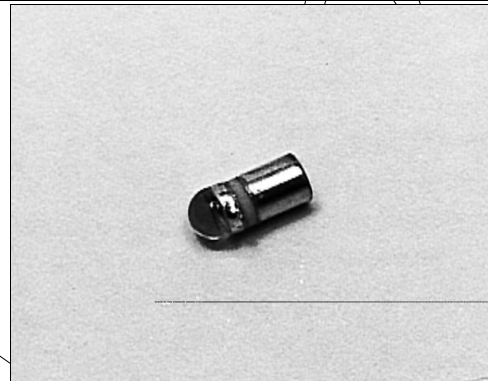


SE2470

AlGaAs Infrared Emitting Diode

FEATURES

- Miniature, hermetically sealed, pill style, metal can package
- 18° (nominal) beam angle
- Wide operating temperature range (-55°C to +125°C)
- Higher power output than GaAs at equivalent drive currents
- Ideal for direct mounting to printed circuit boards
- 880 nm wavelength
- Mechanically and spectrally matched to SD2420 photodiode, SD2440 phototransistor and SD2410 photodarlington

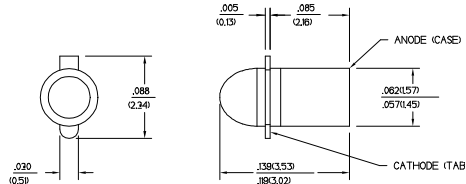


DESCRIPTION

The SE2470 is a high intensity aluminum gallium arsenide infrared emitting diode mounted in a hermetically sealed, glass lensed, metal can package. This package directly mounts in double sided PC boards. These devices typically exhibit 70% greater power intensity than gallium arsenide devices at the same forward current.

OUTLINE DIMENSIONS in inches (mm)

Tolerance 3 plc decimals ±0.005(0.12)
2 plc decimals ±0.020(0.51)



DIM_002.ds4

SE2470

AlGaAs Infrared Emitting Diode

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Radiant Intensity ⁽¹⁾ SE2470-001 SE2470-002	IE	1.7 6.0			mW/sr	I _F =50 mA
Forward Voltage	V _F			1.8	V	I _F =50 mA
Reverse Breakdown Voltage	V _{BR}	3.0			V	I _R =10 µA
Peak Output Wavelength	λ _p		880		nm	
Spectral Bandwidth	Δλ		80		nm	
Spectral Shift With Temperature	Δλ _p /ΔT		0.2		nm/°C	
Beam Angle ⁽²⁾	Ø		18		degr.	I _F =Constant
Radiation Rise And Fall Time	t _r , t _f		0.7		µs	

Notes

1. Measured in mW/steradian (sr) into 0.01 steradians.

2. Beam angle is defined as the total included angle between the half intensity points.

ABSOLUTE MAXIMUM RATINGS

(25°C Free-Air Temperature unless otherwise noted)

Continuous Forward Current	75 mA
Power Dissipation	125 mW ⁽¹⁾
Operating Temperature Range	-55°C to 125°C
Storage Temperature Range	-65°C to 150°C
Soldering Temperature (10 sec)	260°C

Notes

1. Derate linearly from 25°C free-air temperature at the rate of 1.19 mW/°C when soldered into a double sided printed circuit board.

SCHEMATIC

Anode



Cathode

Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

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SE2470

AlGaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement

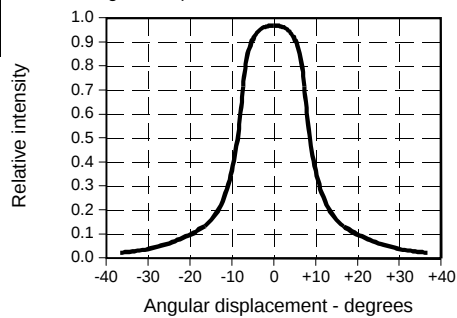


Fig. 2 Radiant Intensity vs Forward Current

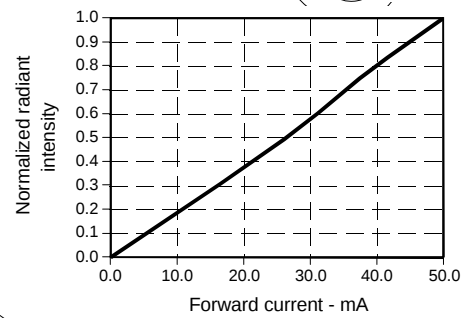


Fig. 3 Forward Voltage vs Forward Current

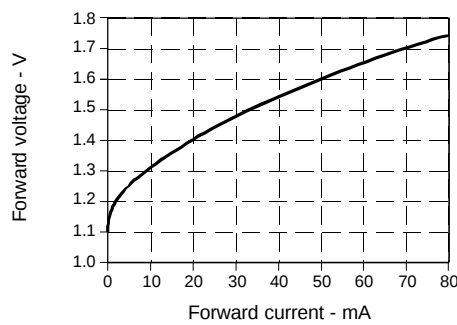


Fig. 4 Forward Voltage vs Temperature

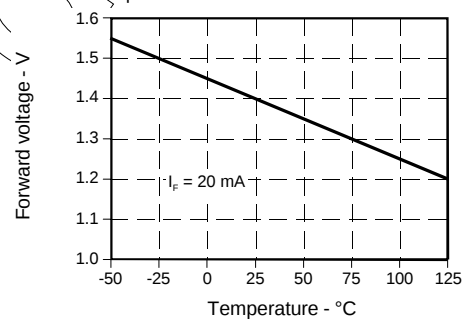


Fig. 5 Spectral Bandwidth

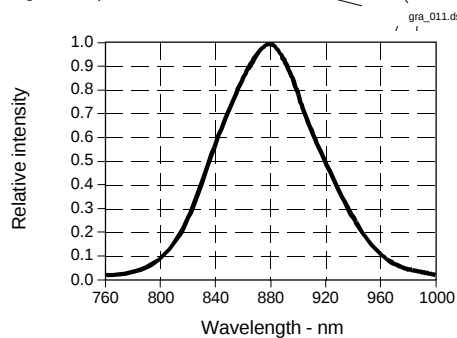
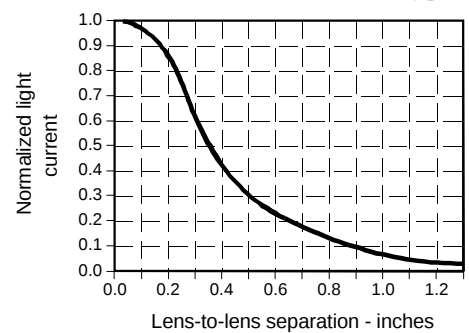


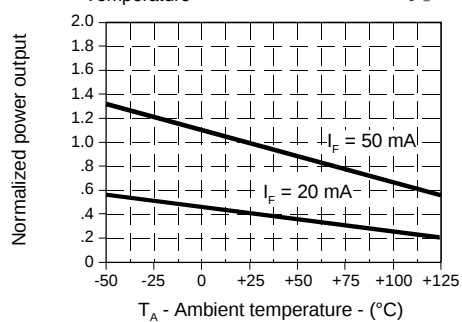
Fig. 6 Coupling Characteristics with SD2440



SE2470

AlGaAs Infrared Emitting Diode

Fig. 7 Normalized Power Output vs Temperature



All Performance Curves Show Typical Values

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