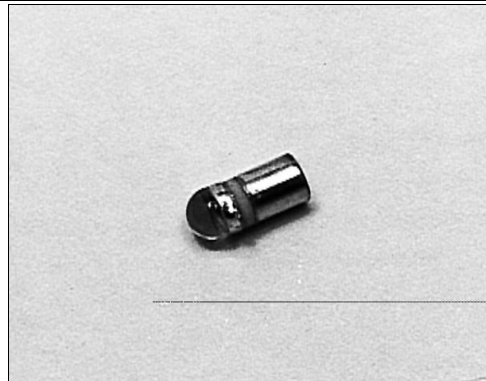


SE2470

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



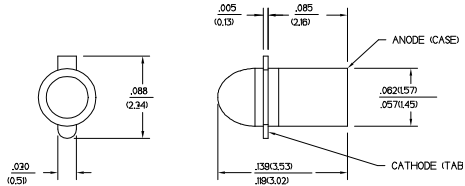
INFRA-1.TIF

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.d54

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



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

Honeywell

SE2470

AlGaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement gra_111.ds4

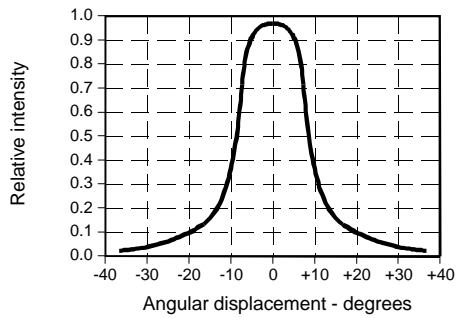


Fig. 2 Radiant Intensity vs Forward Current gra_016.ds4

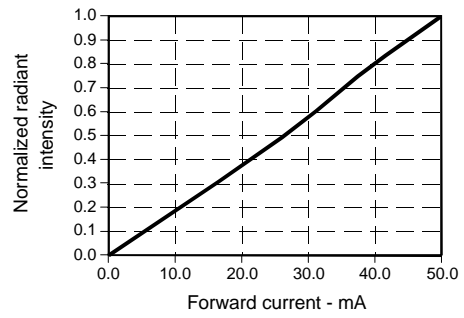


Fig. 3 Forward Voltage vs Forward Current gra_204.ds4

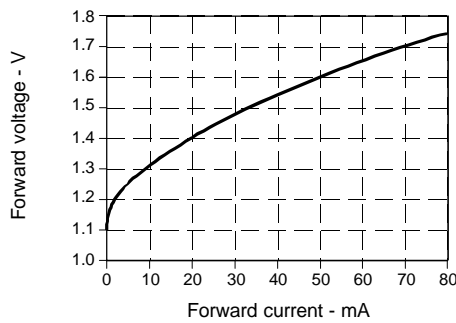


Fig. 4 Forward Voltage vs Temperature gra_202.ds4

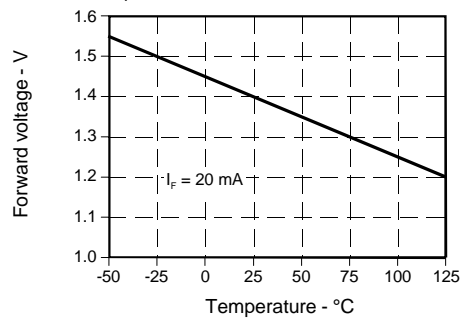


Fig. 5 Spectral Bandwidth gra_011.ds4

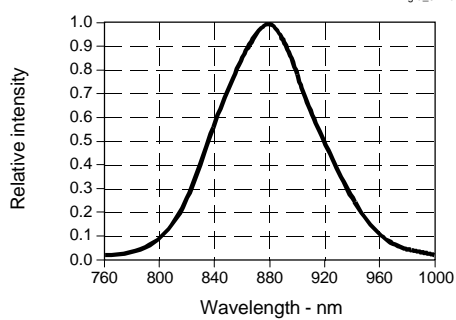
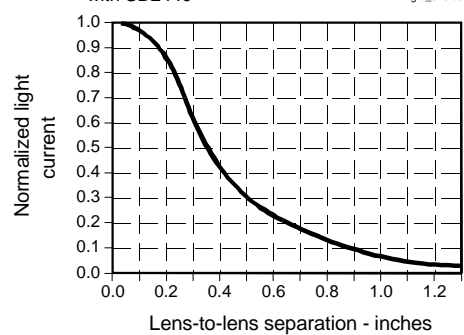
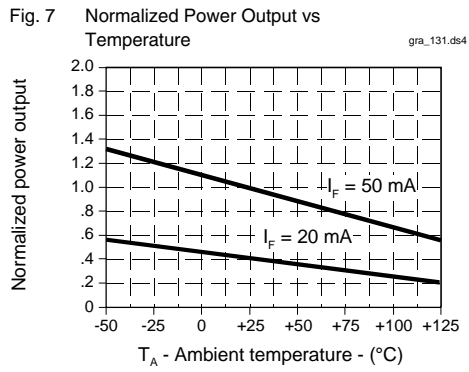


Fig. 6 Coupling Characteristics with SD2440 gra_015.ds4



SE2470

AlGaAs Infrared Emitting Diode



All Performance Curves Show Typical Values