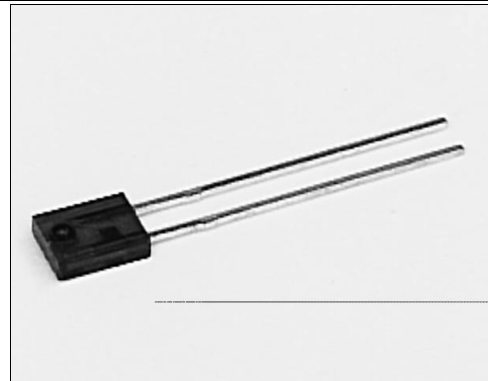


SEP8706

AlGaAs Infrared Emitting Diode

FEATURES

- Side-looking plastic package
- 50° (nominal) beam angle
- 880 nm wavelength
- Higher output power than GaAs at equivalent drive currents
- Mechanically and spectrally matched to SDP8406 phototransistor, SDP8106 photodarlington and SDP8000/8600 series Schmitt trigger



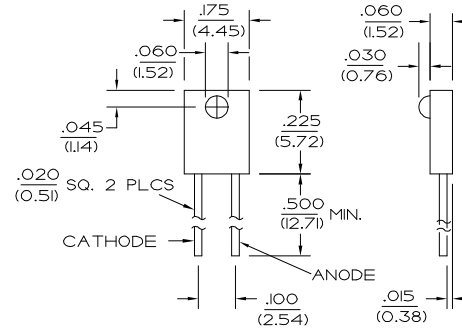
INFRA-20.TIF

DESCRIPTION

The SEP8706 is an aluminum gallium arsenide infrared emitting diode molded in a side-emitting smoke gray plastic package. The chip is positioned to emit radiation through a plastic lens from the side of the package. 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_071.ds4

SEP8706

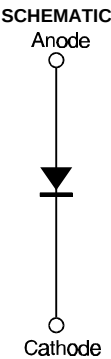
AlGaAs Infrared Emitting Diode

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)						
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Irradiance ⁽¹⁾	H				mW/cm²	I _F =20 mA
SEP8706-001		0.20				
SEP8706-002		0.45		2.6		
SEP8706-003		0.65				
Forward Voltage	V _F			1.7	V	I _F =20 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		50		degr.	I _F =Constant
Radiation Rise And Fall Time	t _r , t _f		0.7		µs	

- Notes
- Measured in mW/cm² into a 0.104 (2.64) diameter aperture placed 0.535(13.6) from the lens tip.
 - 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	50 mA
Power Dissipation	100 mW ⁽¹⁾
Operating Temperature Range	-40°C to 85°C
Storage Temperature Range	-40°C to 85°C
Soldering Temperature (5 sec)	240°C

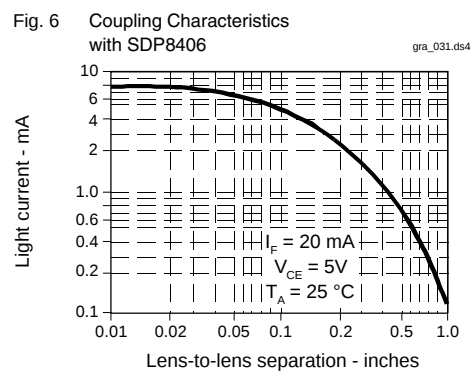
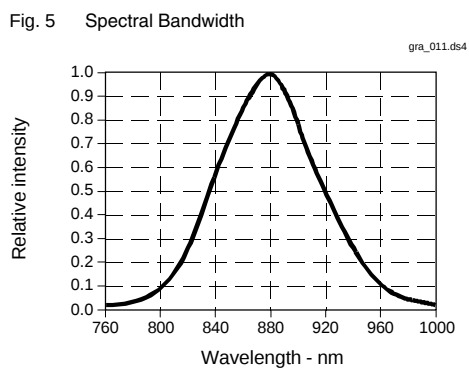
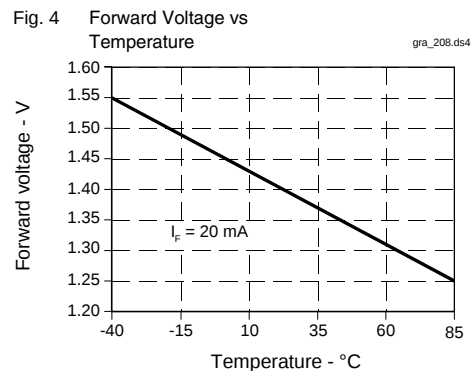
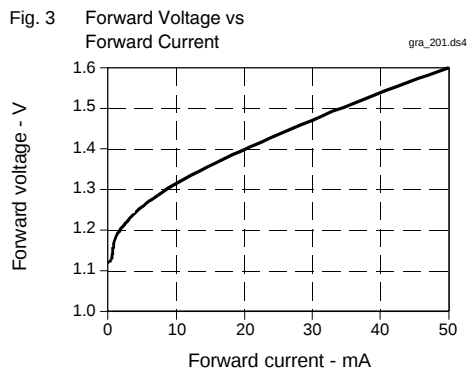
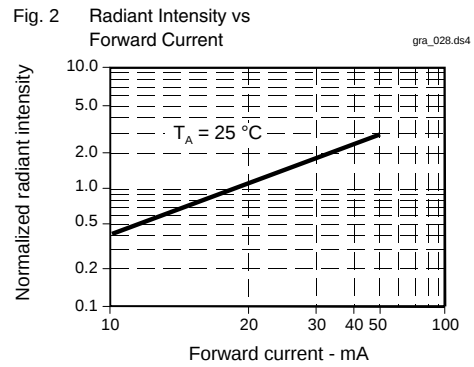
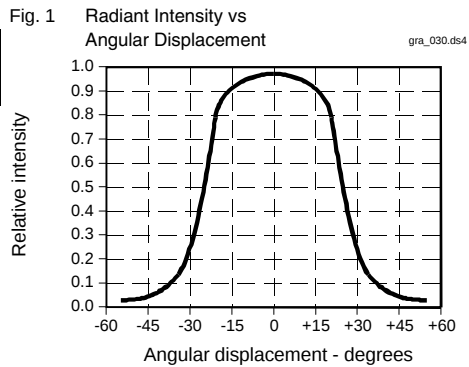
- Notes
- Derate linearly from 25°C free-air temperature at the rate of 0.78 mW/°C.



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

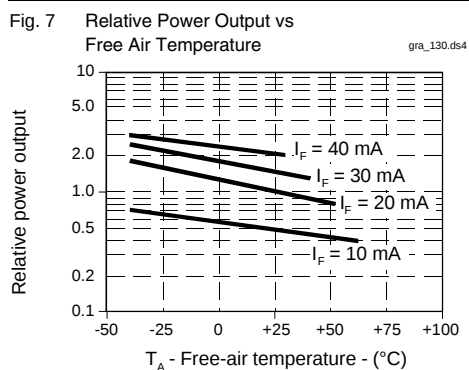
SEP8706

AlGaAs Infrared Emitting Diode



SEP8706

AlGaAs Infrared Emitting Diode



All Performance Curves Show Typical Values