

SEP8736

AlGaAs Infrared Emitting Diode

FEATURES

- Side-looking plastic package
- 10° (nominal) beam angle
- 880 nm wavelength
- Enhanced coupling distance
- Mechanically and spectrally matched to SDP8436 phototransistor



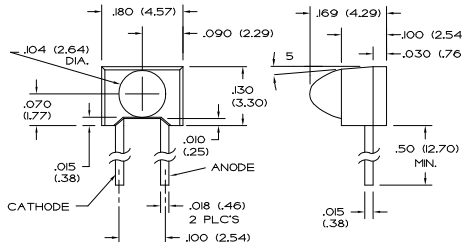
INFRA-80.TIF

DESCRIPTION

The SEP8736 is an aluminum gallium arsenide infrared emitting diode molded in a side-emitting smoke gray plastic package. The body and integral lens design combines the mounting advantage of a side-emitting package with the narrow emission pattern of a T-1 style device. The SEP8736 IRED is designed for those applications which require longer coupling distances than standard side-emitting devices can provide, such as touch screens. The IRED is also especially well suited to applications in which adjacent channel crosstalk could be a problem.

OUTLINE DIMENSIONS in inches (mm)

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



DIM_070.dwg

SEP8736

AlGaAs Infrared Emitting Diode

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Irradiance ⁽¹⁾	H				mW/cm ²	I _F =20 mA
SEP8736-001		0.5				
SEP8736-002		1.2	3.0			
SEP8736-003		1.7				
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⁾	∅		10		degr.	I _F =Constant
Radiation Rise And Fall Time	t _r , t _f		0.7		μs	

Notes

1. Measured in mW/cm² into a 0.104 (2.64) diameter aperture placed 0.500(12.7) from the lens tip.
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	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

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

SCHEMATIC



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

Honeywell

SEP8736

AlGaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement gra_097.ds4

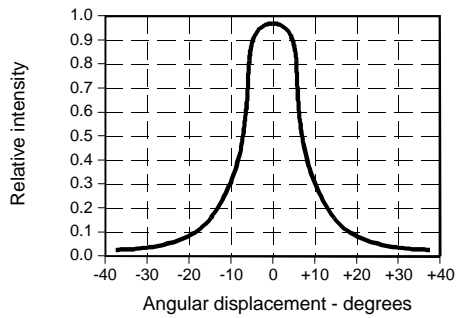


Fig. 2 Radiant Intensity vs Forward Current gra_033.ds4

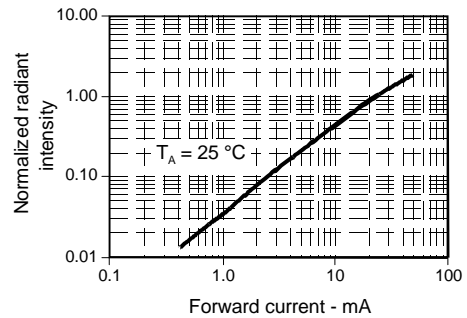


Fig. 3 Forward Voltage vs Forward Current gra_201.ds4

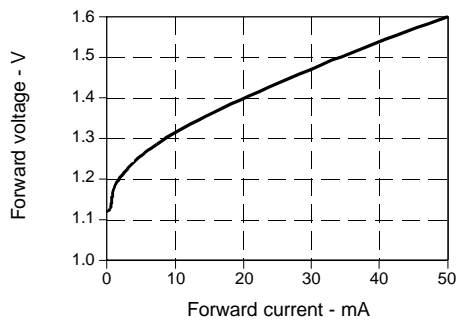


Fig. 4 Forward Voltage vs Temperature gra_208.ds4

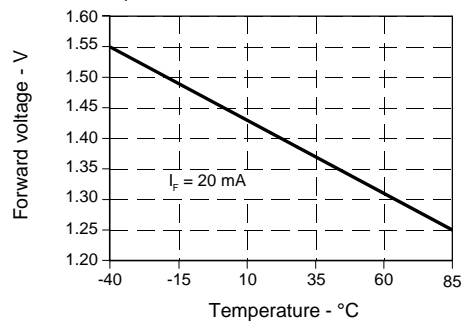


Fig. 5 Spectral Bandwidth gra_011.ds4

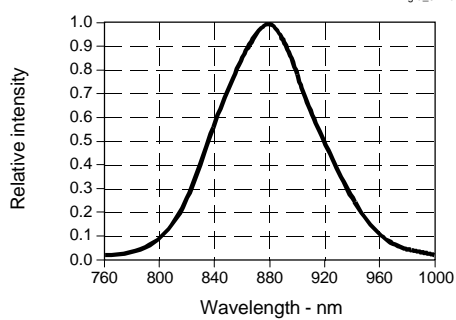
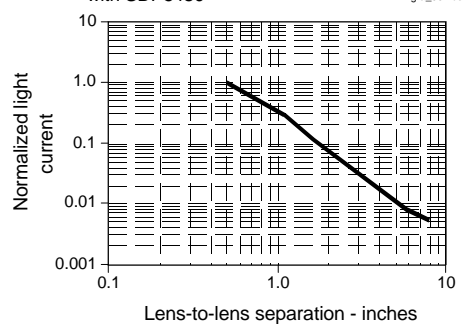
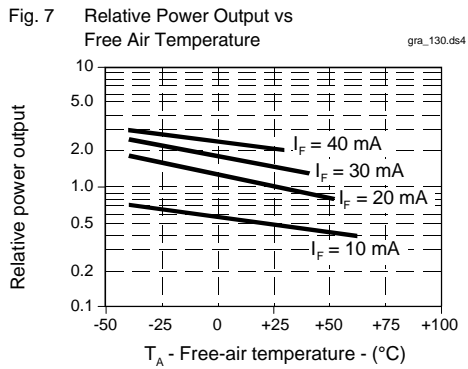


Fig. 6 Coupling Characteristics with SDP8436 gra_034.ds4



SEP8736

AlGaAs Infrared Emitting Diode



All Performance Curves Show Typical Values

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

Honeywell

59



Elblinger Elektronik GmbH
Lange Wanne 25
38259 Salzgitter

Telefon 05341/8212-1
Fax 05341/821299

e-mail mail@elblinger-elektronik.de
Internet www.elblinger-elektronik.de