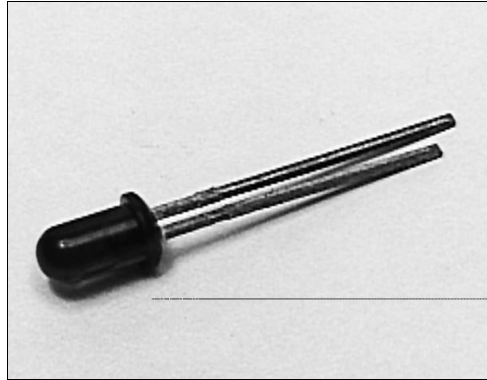


SEP8505

GaAs Infrared Emitting Diode

FEATURES

- T-1 package
- 15° (nominal) beam angle
- 935 nm wavelength
- Consistent on-axis optical properties
- Mechanically and spectrally matched to SDP8405 phototransistor and SDP8105 photodarlington



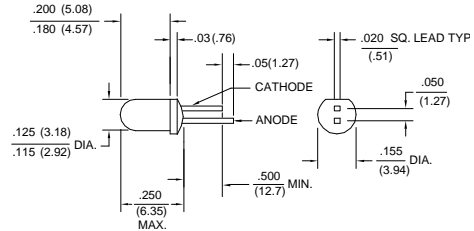
INFRA-55.TIF

DESCRIPTION

The SEP8505 is a gallium arsenide infrared emitting diode transfer molded in a T-1 red plastic package. Transfer molding of this device assures superior optical centerline performance compared to other molding processes. Lead lengths are staggered to provide a simple method of polarity identification.

OUTLINE DIMENSIONS in inches (mm)

Tolerance 3 plc decimals $\pm 0.005(0.12)$
2 plc decimals $\pm 0.020(0.51)$



DIM_101.d54

SEP8505

GaAs 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
SEP8505-001		0.5				
SEP8505-002		1.0	4.0			
SEP8505-003		2.0	4.0			
Forward Voltage	V _F			1.5	V	I _F =20 mA
Reverse Breakdown Voltage	V _{BR}	3.0			V	I _R =10 μA
Peak Output Wavelength	λ _p		935		nm	
Spectral Bandwidth	Δλ		50		nm	
Spectral Shift With Temperature	Δλ _p /ΔT		0.3		nm/°C	
Beam Angle ⁽²⁾	Ø		15		degr.	I _F =Constant
Radiation Rise And Fall Time	t _r , t _f		0.7		μs	

Notes

1. Measured in mW/cm² into a 0.081(2.05) diameter aperture placed 0.40(10.16) 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	70 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 0.18 mW/°C.

SCHEMATIC



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

Honeywell

SEP8505

GaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement gra_027.ds4

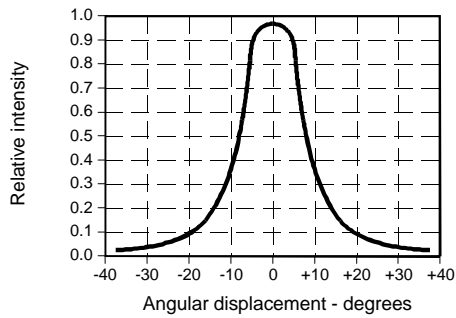


Fig. 2 Radiant Intensity vs Forward Current gra_028.ds4

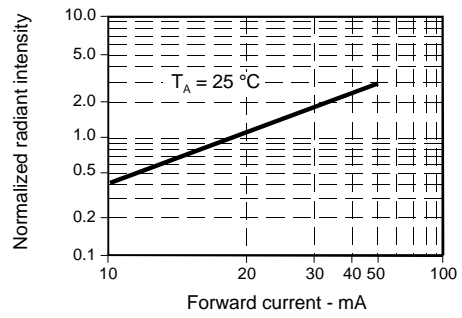


Fig. 3 Forward Voltage vs Forward Current gra_003.ds4

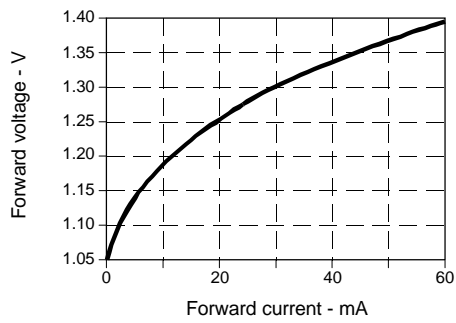


Fig. 4 Forward Voltage vs Temperature gra_207.ds4

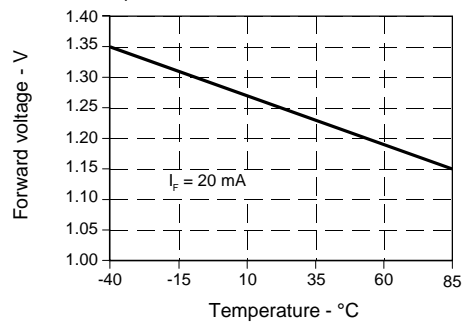


Fig. 5 Spectral Bandwidth gra_005.ds4

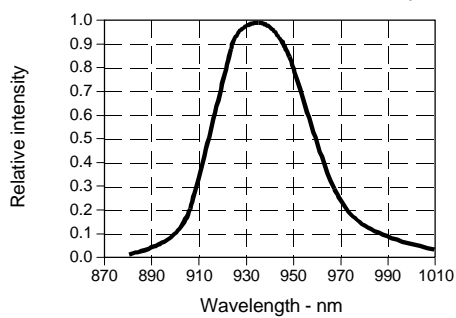
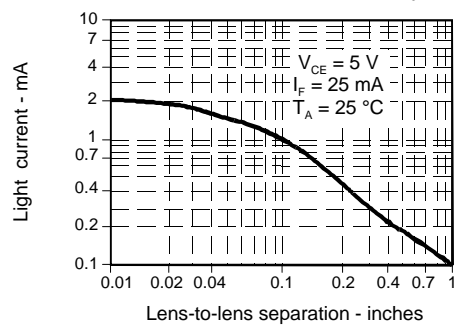
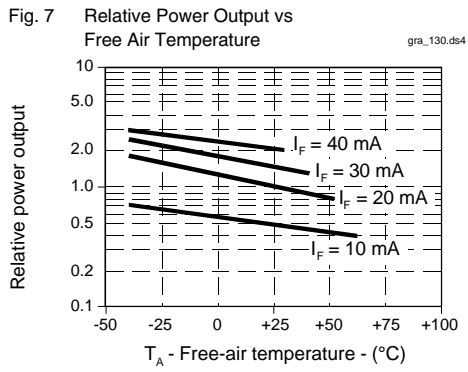


Fig. 6 Coupling Characteristics with SDP8405 gra_029.ds4



SEP8505

GaAs Infrared Emitting Diode



All Performance Curves Show Typical Values

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Infrared Emitters](#) category:

Click to view products by [Honeywell](#) manufacturer:

Other Similar products are found below :

[LTE-309](#) [LTE-3279K](#) [LTE-4206C](#) [LTE-4208C](#) [EAILP03RDAA6](#) [LTE-2871C](#) [LTE-4238](#) [ASDL-4264-C22](#) [OED-EL305F4C50-HT](#) [OP216-004](#) [LTE-3376](#) [EEL109](#) [HL-PST-1608IR1C-L4](#) [SFH 7016](#) [IN-S126DSHIR](#) [IN-S126ETHIR](#) [IN-S42CTQHIR](#) [IN-S63FTHIR](#) [MHT153IRCT](#) [MHS153IRCT](#) [HIR204C/H0](#) [HIR323C](#) [LTE-209](#) [IR12-21C/TR8](#) [IR17-21C/TR8](#) [IR26-21C/L110/TR8](#) [IR91-21C/TR10](#) [KM-4457F3C](#) [L-53F3BT](#) [WP3A10F3C](#) [LTE-4208](#) [IR42-21C/TR8](#) [HSDL-4261](#) [APA3010F3C-GX](#) [SE2460-140](#) [OP266-905](#) [OP280D](#) [LTE-2871](#) [HIR8323/C16](#) [KP-2012SF4C](#) [KPA-3010F3C](#) [L-7113SF6C](#) [HIR19-21C/L11/TR8](#) [IR19-21C/TR8](#) [IR11-21C/TR8](#) [IR204/H60](#) [L-34F3C](#) [L-34SF4C](#) [L-7104F3BT](#) [HIR204C](#)