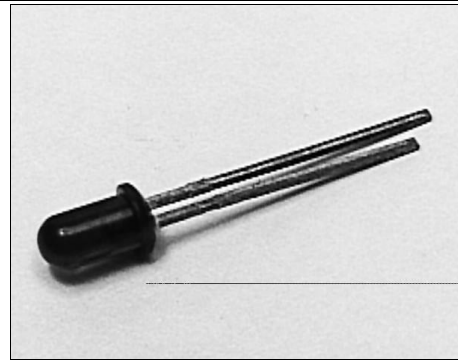


# SEP8505

## 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



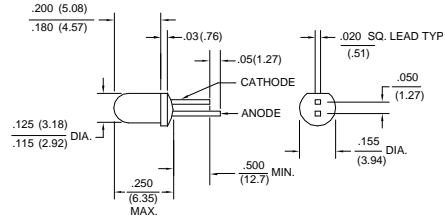
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### DESCRIPTION

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



DIM\_101.d64

# SEP8505

## GaAs Infrared Emitting Diode

### ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Irradiance <sup>(1)</sup>	H				mW/cm <sup>2</sup>	I <sub>F</sub> =20 mA
SEP8505-001		0.5				
SEP8505-002		1.0		4.0		
SEP8505-003		2.0		4.0		
Forward Voltage	V <sub>F</sub>			1.5	V	I <sub>F</sub> =20 mA
Reverse Breakdown Voltage	V <sub>BR</sub>	3.0			V	I <sub>R</sub> =10 μA
Peak Output Wavelength	λ <sub>p</sub>		935		nm	
Spectral Bandwidth	Δλ		50		nm	
Spectral Shift With Temperature	Δλ <sub>p</sub> /ΔT		0.3		nm/°C	
Beam Angle <sup>(2)</sup>	∅		15		degr.	I <sub>F</sub> =Constant
Radiation Rise And Fall Time	t <sub>r</sub> , t <sub>f</sub>		0.7		μs	

#### Notes

1. Measured in mW/cm<sup>2</sup> 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 <sup>(1)</sup>
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

Anode



Cathode

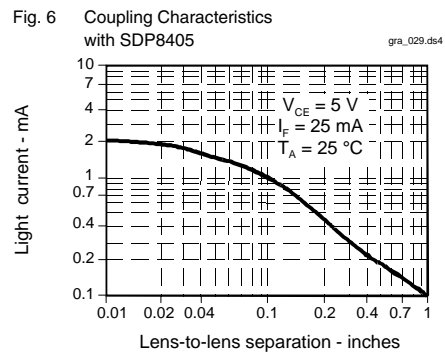
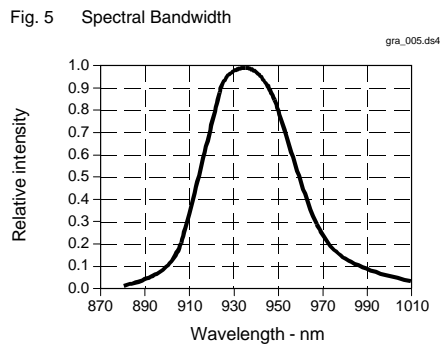
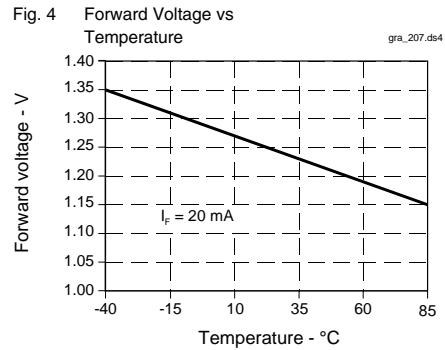
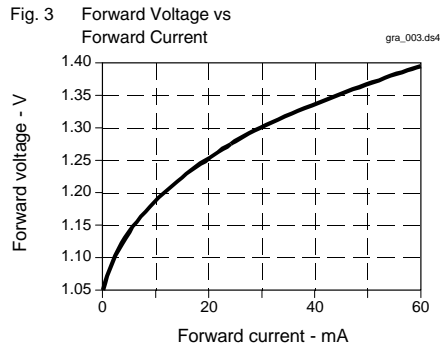
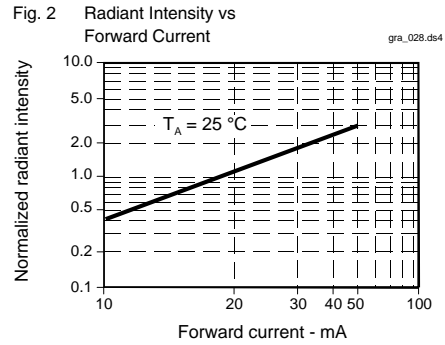
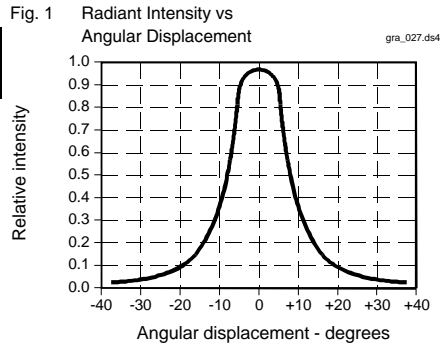
Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

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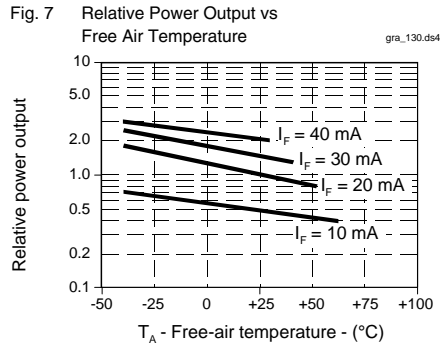
# SEP8505

## GaAs Infrared Emitting Diode



# SEP8505

GaAs 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.

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