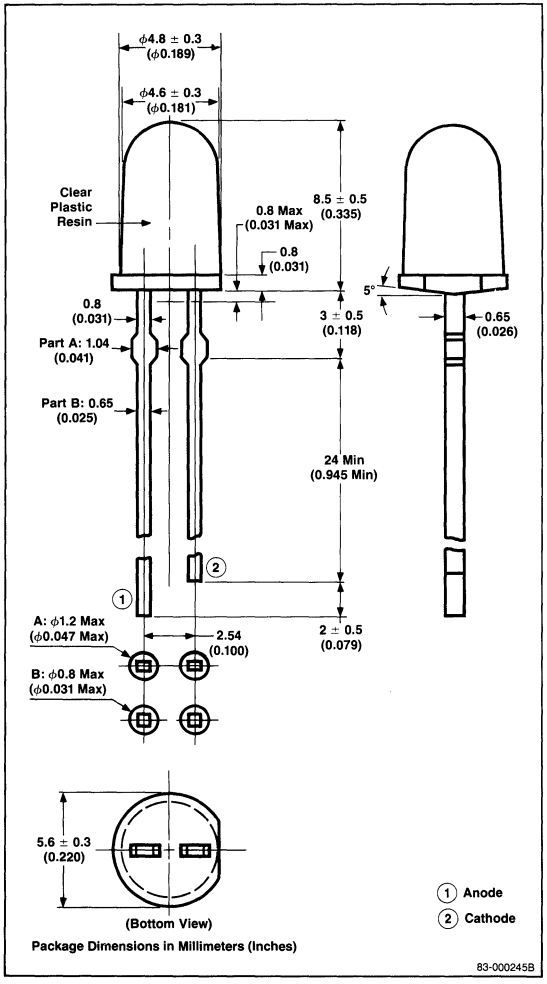
SE303A
GaAs INFRARED EMITTING DIODE
NEPOC SERIES

Description

The SE303A is a GaAs (gallium arsenide) infrared emitting diode which is mounted on the lead frames and molded in plastic. On forward bias, it emits a spectrally narrow band of radiation peaking at 940nm.

Package Dimensions



Package Dimensions in Millimeters (Inches)

83-000245B

Features

- ☐ Economical
- ☐ High output power
- ☐ Wide half angle
- ☐ Good linearity
- ☐ Spectrally matched to silicon sensors
- ☐ Long lead

Applications

- ☐ Light source for TV remote control
- ☐ Light source for smoke detector
- ☐ Optical encoders
- ☐ Photo choppers, isolator

Absolute Maximum Ratings

T_A = +25°C

Power Dissipation, P_D	150mW
Forward Current, I_F	100mA
Pulse Forward Current, I_{FP}[1]	1.0A
Reverse Voltage, V_R	5.0V
Junction Temperature, T_J	+80°C
Storage Temperature, T_{STG}	−30°C to +80°C

Electro-Optical Characteristics

T_A = +25°C

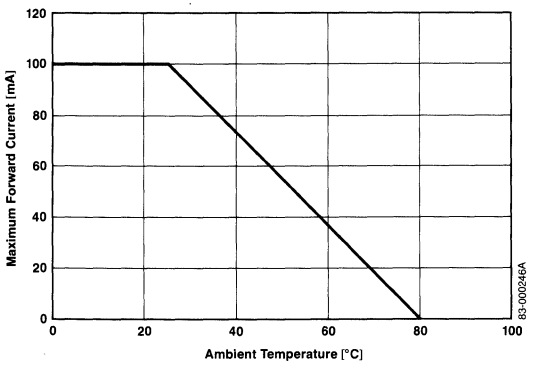
Parameters	Symbol	Limits Min	Typ	Max	Unit	Test Conditions
Forward Voltage	V_F		1.25	1.45	V	I_F = 50mA
Pulse Forward Voltage	V_{FP}[1]		2.5	3.0	V	I_{FP} = 1.0A
Capacitance	C_T		40		pF	V = 0, f = 1.0MHz
Peak Emission Wavelength	λ_{PEAK}		940		nm	I_F = 50mA
Spectral Line Half Width	$\Delta\lambda$		60		nm	I_F = 50mA
Output Power	P_O	3.0	6.5		mW	I_F = 50mA
Peak Output Power	P_{FP}[1]	15			mW	I_{FP} = 1.0A
Light Turn-On and Turn-Off	t_{ON}, t_{OFF}		1		μs	

Note: 1. f = 1.0kHz, duty cycle 1%.

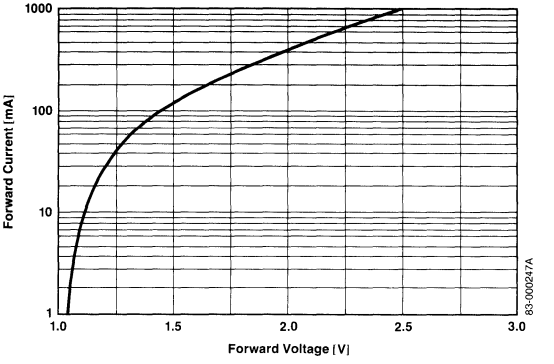
Typical Characteristics

T_A = +25°C

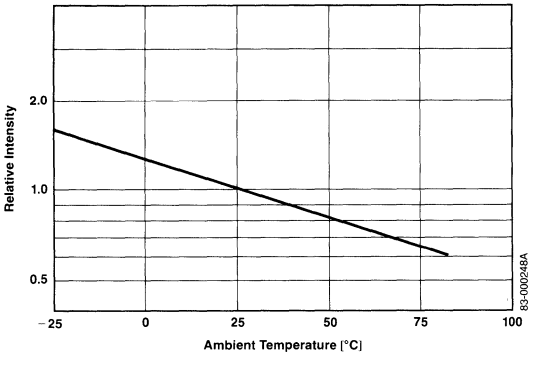
Maximum Forward Current vs Ambient Temperature



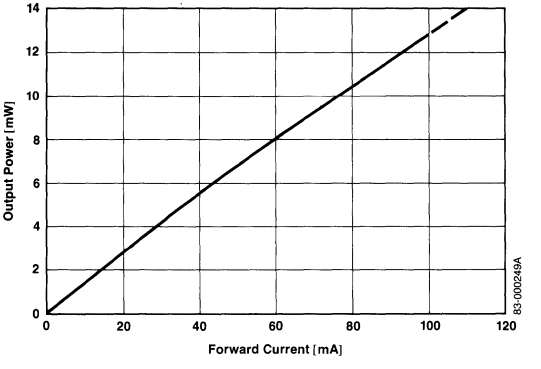
Forward Current vs Forward Voltage



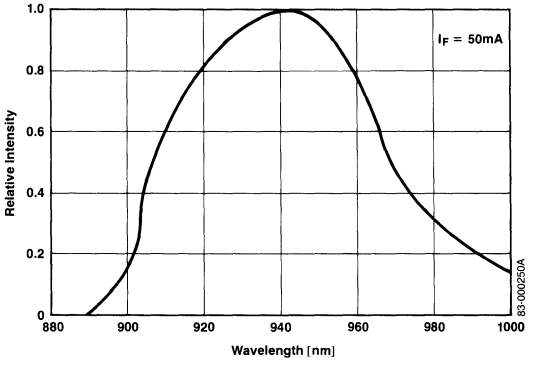
Relative Intensity vs Ambient Temperature



Output Power vs Forward Current



Spectral Distribution



Spatial Distribution