



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

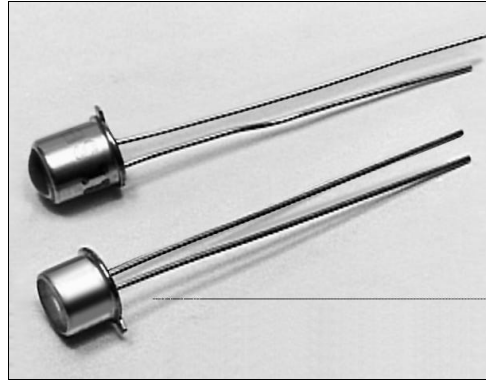


SE3450/5450

GaAs Infrared Emitting Diode

FEATURES

- TO-46 metal can package
- Choice of flat window or lensed package
- 90° or 20° (nominal) beam angle option
- 935 nm wavelength
- Wide operating temperature range (-55°C to +125°C)
- Mechanically and spectrally matched to SD3421/5421 photodiode, SD3443/5443/5491 phototransistor, SD3410/5410 photodarlington and SD5600 series Schmitt trigger



INFRA-83.TIF

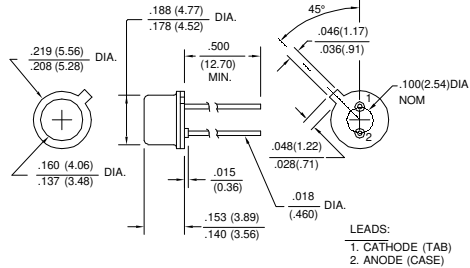
DESCRIPTION

The SE3450/5450 series consists of a gallium arsenide infrared emitting diode mounted in a TO-46 metal can package. The SE3450 series has flat window cans providing a wide beam angle, while the SE5450 series has glass lensed cans providing a narrow beam angle. The TO-46 packages offer high power dissipation capability and are ideally suited for operation in hostile environment.

OUTLINE DIMENSIONS in inches (mm)

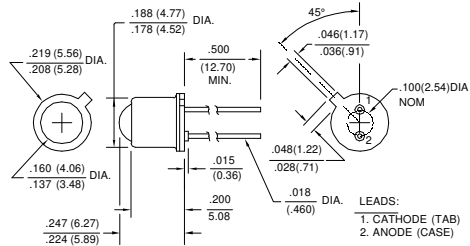
Tolerance 3 plc decimals ±0.005(0.12)
2 plc decimals ±0.020(0.51)

SE3450



DIM_003a.ds4

SE5450



DIM_003b.ds4

SE3450/5450

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 =100 mA
SE3450-011, SE5450-011		0.30				
SE3450-012, SE5450-012		0.50				
SE3450-013, SE5450-013		1.00				
SE3450-014, SE5450-014		1.50				
Forward Voltage	V _F			1.7	V	I _F =100 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⁾	∅				degr.	I _F =Constant
SE3450			90			
SE5450			20			
Radiation Rise And Fall Time	t _r , t _f		0.7		μs	

Notes

- SE3450 measured into a 0.250 (6.35) diameter aperture placed 0.33(8.4) from window surface. SE5450 measured into a 0.250 (6.35) diameter aperture placed 1.20 (30.5) from 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	100 mA
Power Dissipation	150 mW ⁽¹⁾
Operating Temperature Range	-55°C to 125°C
Storage Temperature Range	-65°C to 150°C
Soldering Temperature (10 sec)	260°C

Notes

- Derate linearly from 25°C free-air temperature at the rate of 1.43 mW/°C.

SCHEMATIC



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

Honeywell

SE3450/5450

GaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement (SE3450) gra_017.ds4

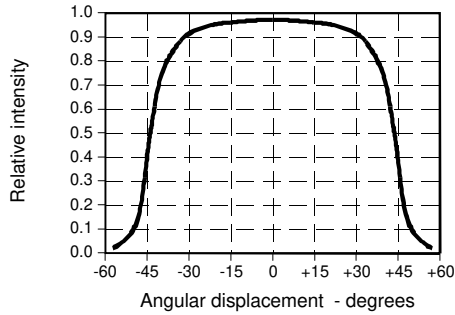


Fig. 2 Radiant Intensity vs Angular Displacement (SE5450) gra_023.ds4

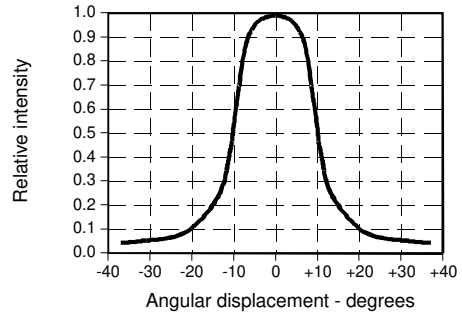


Fig. 3 Radiant Intensity vs Forward Current gra_018.ds4

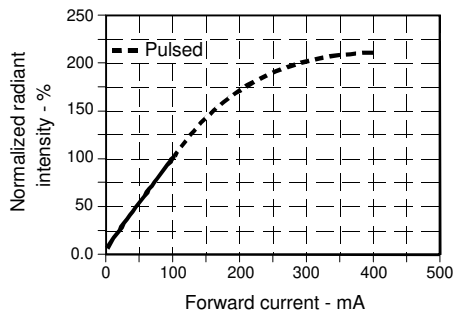


Fig. 4 Forward Voltage vs Forward Current gra_205.ds4

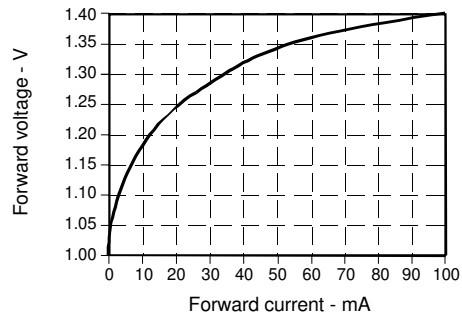


Fig. 5 Forward Voltage vs Temperature gra_206.ds4

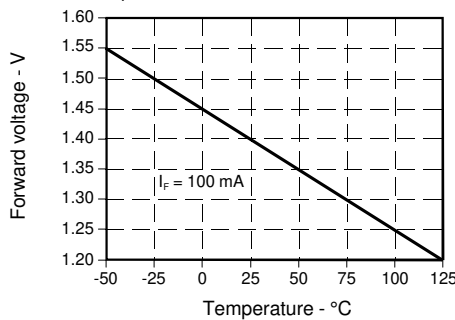
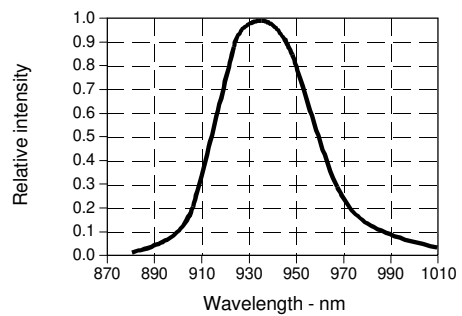


Fig. 6 Spectral Bandwidth gra_005.ds4



SE3450/5450

GaAs Infrared Emitting Diode

Fig. 7 Coupling Characteristics
SE3450 with SD3443 gra_021.ds4

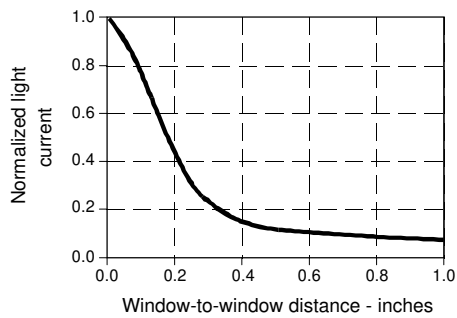


Fig. 8 Coupling Characteristics
SE5450 with SD5443 gra_024.ds4

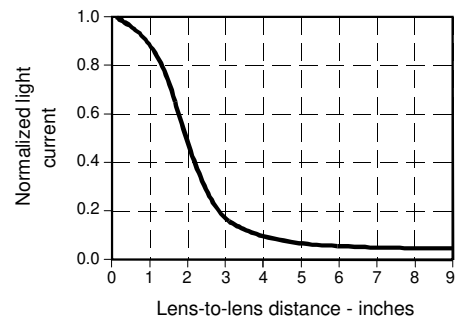
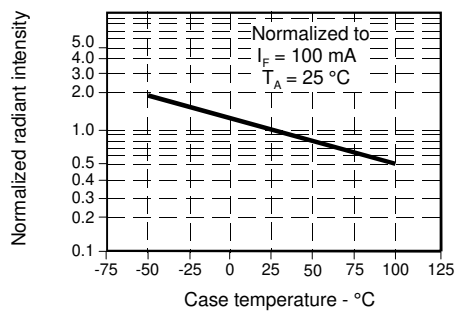


Fig. 9 Radiant Intensity vs
Case Temperature gra_022.ds4



All Performance Curves Show Typical Values