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

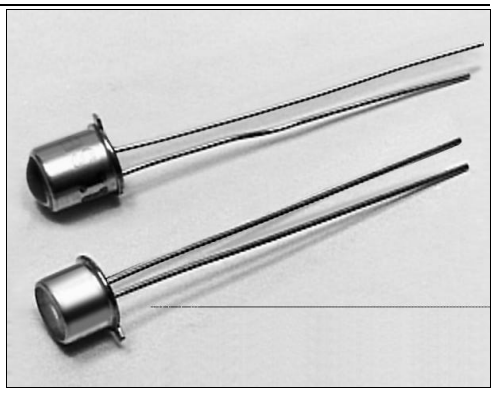
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

SE3470/5470

AlGaAs Infrared Emitting Diode

FEATURES

- TO-46 metal can package
- Choice of flat window or lensed package
- 90° or 20° (nominal) beam angle option
- 880 nm wavelength
- Higher output power than GaAs at equivalent drive currents
- Wide operating temperature range (- 55°C to +125°C)
- Ideal for high pulsed current applications
- Mechanically and spectrally matched to SD3421/5421 photodiode, SD3443/5443/5491phototransistor, SD3410/5410 photodarlington and SD5600 series Schmitt trigger



INFRA-83.TIF

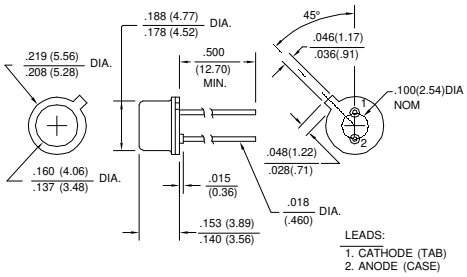
DESCRIPTION

The SE3470/5470 series consists of aluminum gallium arsenide infrared emitting diode mounted in a TO-46 metal can package. The SE3470 series has flat window cans providing a wide beam angle, while the SE5470 series has glass lensed cans providing a narrow beam angle. These devices typically exhibit 70% greater power output than gallium arsenide devices at the same forward current. The TO-46 packages offer high power dissipation capability and are ideally suited for operation in hostile environments.

OUTLINE DIMENSIONS in inches (mm)

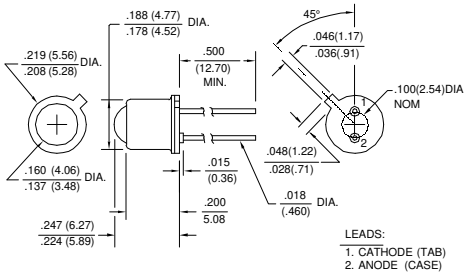
Tolerance	3 plc decimals	±0.005(0.12)
	2 plc decimals	±0.020(0.51)

SE3470



DIM_005a.ds4

SE5470



DIM_005b.ds4

Honeywell

SE3470/5470

AlGaAs Infrared Emitting Diode

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Total Power Output [1]	P_O				mW	I_F=100 mA
SE3470-001		7.0				
SE3470-002		9.0				
SE3470-003		10.5				
SE5470-001		7.0				
Irradiance [2]	H				mW/cm²	I_F=100 mA
SE5470-002		1.5				
SE5470-003		2.6		5.9		
SE5470-004		3.5				
Forward Voltage	V_F			1.9	V	I_F=100 mA
Reverse Breakdown Voltage	V_{BR}	3.0			V	I_R=10 µA
Peak Output Wavelength	λ_p		880		nm	
Spectral Bandwidth	$\Delta\lambda$		80		nm	
Spectral Shift With Temperature	$\Delta\lambda_p/\Delta_T$		0.2		nm/°C	
Beam Angle [3]	Ø				degr.	I_F=Constant
SE3470			90			
SE5470			20			
Radiation Rise And Fall Time	t_r, t_f		0.7		µs	

Notes
1. Total power emitted from the package in mW.
2. Measured into a 0.25 (6.35) aperture placed at 1.20(30.5) from lens tip.
3. 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
Peak Forward Current	3 A
(1µs pulse width, 300 pps)	
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
1. Derate linearly from 25°C free-air temperature at the rate of 1.43 mW/°C.

SCHEMATIC

Honeywell

SE3470/5470

AlGaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement (SE3470)

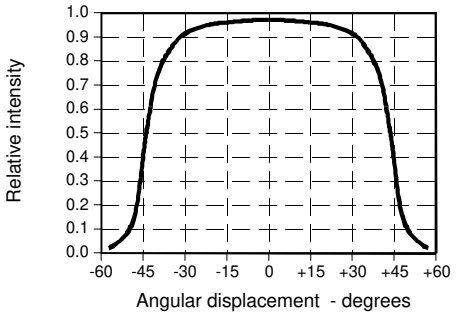


Fig. 2 Radiant Intensity vs Angular Displacement (SE5470)

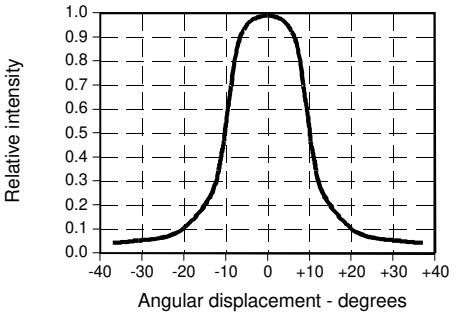


Fig. 3 Radiant Intensity vs Forward Current

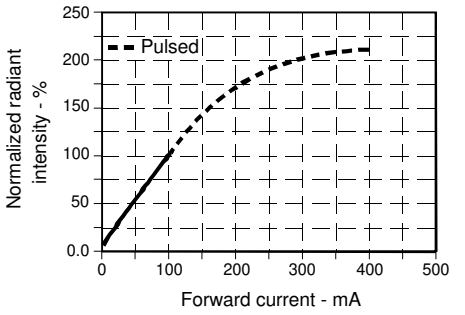


Fig. 4 Forward Voltage vs Forward Current

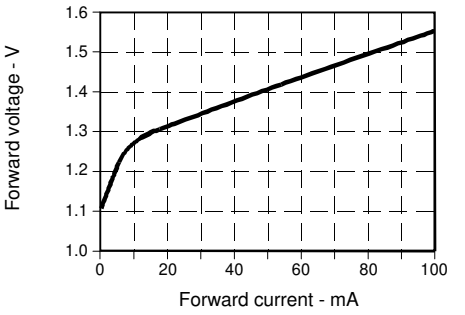


Fig. 5 Forward Voltage vs Temperature

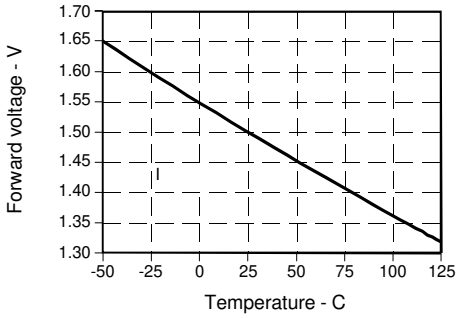
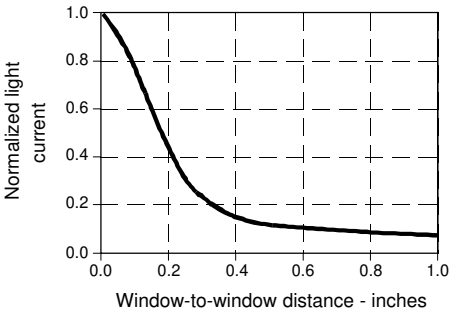


Fig. 6 Coupling Characteristics SE3470 with SD3443



Honeywell

SE3470/5470

AlGaAs Infrared Emitting Diode

Fig. 7 Spectral Bandwidth

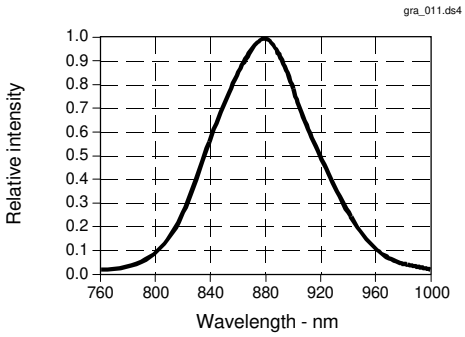


Fig. 8 Radiant Intensity vs Case Temperature

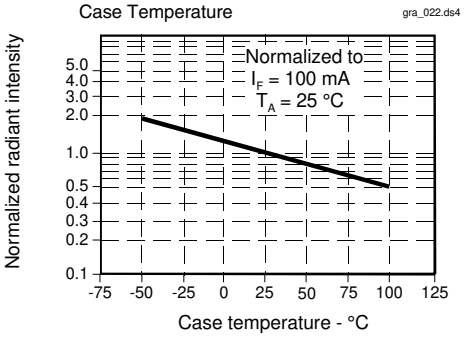
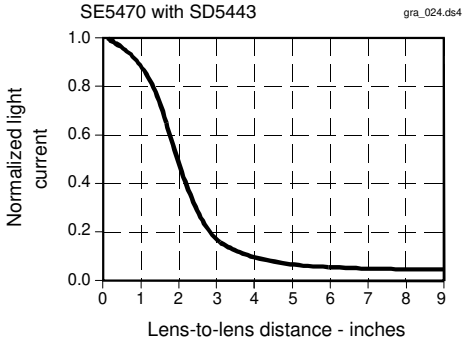


Fig. 9 Coupling Characteristics SE5470 with SD5443



All Performance Curves Show Typical Values

Honeywell