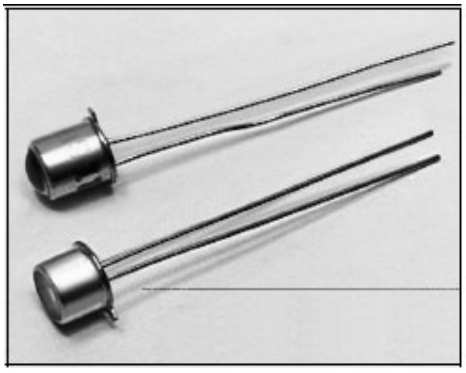
SE3470/5470

AlGaAs infrared emitting diode

characteristic：

- TO-46 Metal case package
- You can choose a flat light window or a lensed package
- Available in 90° or 20° (rated) beam angle options
- 880nm wavelength
- The power output is larger than GaAs under the equivalent drive current
- Wide operating temperature range (-55°C to +125°C)
- Suitable for high pulse current
- It can be used with SD3421/5421 photoelectric diodes, SD3443/5443/5491 photoelectric transistors, SD3410/5410 photosensitive Darlington amplifiers, and SD5600 series bistable circuit triggers for mechanical and spectral matching.



INFRA-83.TIF

description：

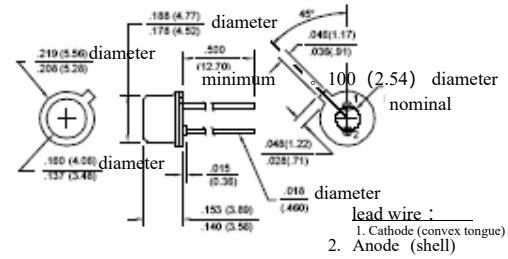
The SE3470/5443 series consists of aluminum gallium arsenide infrared emitters, all housed in TO-46 metal can packages. The SE 3470 model features a flat optical window for wide-angle reception, while the SE5470 includes a glass lens for narrow-beam operation. These TO-46 packages deliver high power capacity and are perfectly suited for harsh environment applications.

Dimensions: inches (mm)

Tolerance: 3 plc decimals ± 0.005 (0.12)

2 plc decimals ± 0.020 (0.51)

SE3470



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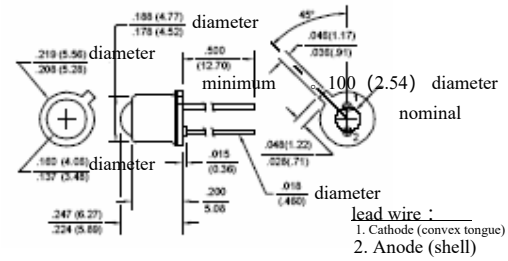
SE5470



DIM_005b.ds4

Electrical characteristics (25℃ unless otherwise stated)

parameter	symbol	Minimum value	Standard value	Maximum value	unit	test condition
Total power output	P_O				mA	I_F =100mA
SE3470-001			7.0			
SE3472-002			9.0			
SE3470-003			10.5			
SE5470-001			7.0			
Luminous(2)	H				mW/cm^2	I_F =100mA
SE5470-002			1.5			
SE5470-003			2.6	5.9		
SE5470-004			3.5			
direct voltage	V_F			1.9	V	I_F=100mA
breakdown reverse voltage	V_{BR}	3.0			V	I_R =10μA
Peak output wavelength	λp		880		nm	
spectral bandwidth	Δλ		80		nm	
The spectrum drifts with temperature	Δλp/ΔT		0.2		nm /℃	
Beam Angle (3)	Φ				° (linear measure)	I_F = constant
SE3470			90			
SE3472			20			
Radiation rise and fall time	t_r , t_f		0.7		μs	

pour：

1. Total transmission power (mW) of the package.
2. Entering the 0.25 (6.35) aperture measurement, the aperture is positioned at 1.20 (30.5) from the top of the lens.
3. The definition of the beam angle is the total Angle between the points of half-beam intensity.

Absolute maximum rating

(If no other explanation is given, the atmospheric temperature is 25℃) continuous positive current	100mA
peak forward current (1μs pulse width, 300 pps) power consumption	3A 150 mW(1)
Working temperature range Storage temperature range Welding temperature (10 seconds)	-55 ℃ to 125 ℃ -65 ℃ to 150 ℃ 260 ℃

pour：

1. From atmospheric temperature of 25 ℃, it decreases linearly ℃ at a rate of 1.43 mW.

diagrammatic sketch

Figure 1 Relationship Between Radiation Intensity and Angle Offset (SE3470)

gra_017.ds4

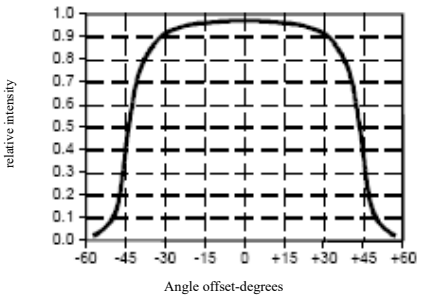


FIG. 3. Relationship Between Radiation Intensity and Forward Current

gra_018.cdr

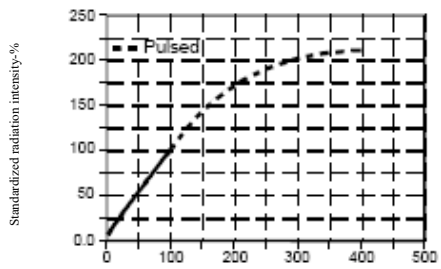


Figure 5. Relationship Between Forward Voltage and Temperature

gra_025.ds4

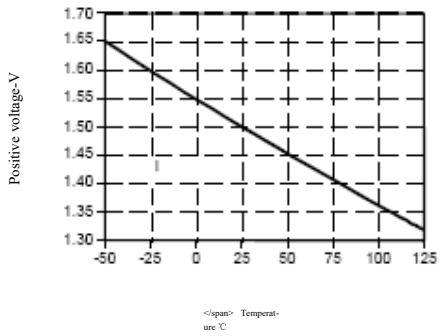


Figure 2. Relationship Between Radiation Intensity and Angular Offset (SE5470)

gra_023.ds4

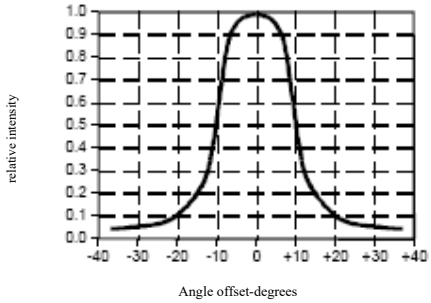


Figure 4. The Relationship Between Forward Voltage and Forward Current

gra_026.ds4

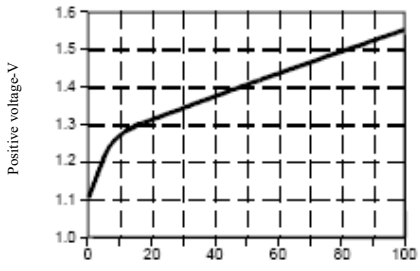


Figure 6. Coupling Characteristics of SE3470 With SD3443

gra_021.ds4

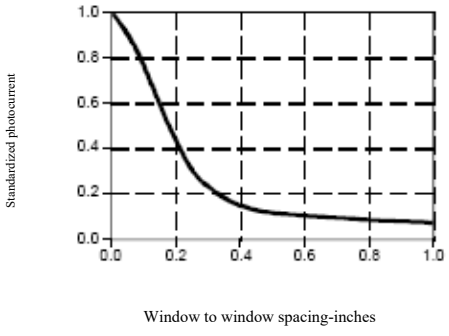


Figure 7. Spectral Responsivity

gra_011.ds4

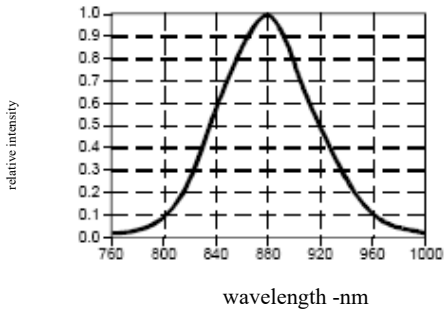


Figure 8. Relationship Between Radiation Intensity and Shell Temperature

gra_022.ds4

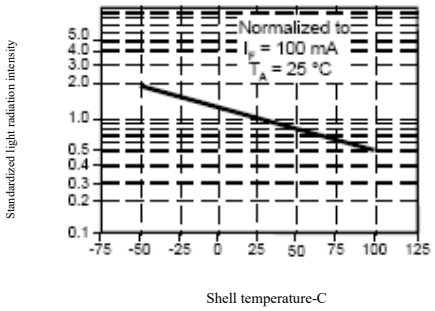
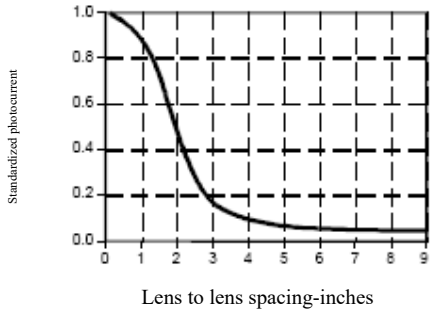


Figure 9. Coupling Characteristics of SE5470 With SD5443

gra_024.ds4



All performance curves are expressed as standard values

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