



SE5455-003
HONEYWELL

Buy Now



Looking for a discount?

[Check out our current promotions!](#)

Give us a call

1-855-837-4225

International: 1-415-281-3866

Email Us

Sales and New Orders: sales@verical.com

Order Support: support@verical.com

Suppliers: [Visit our seller page](#)

Company Address

Arrow Electronics, Inc
9201 East Dry Creek Road
Centennial, CO 80112

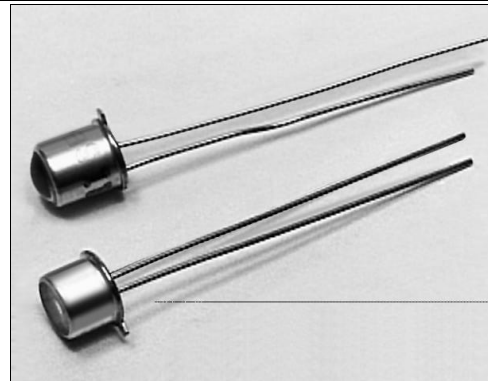
This coversheet was created by Verical, a division of Arrow Electronics, Inc. ("Verical"). The attached document was created by the part supplier, not Verical, and is provided strictly 'as is.' Verical, its subsidiaries, affiliates, employees, and agents make no representations or warranties regarding the attached document and disclaim any liability for the consequences of relying on the information therein. All referenced brands, product names, service names, and trademarks are the property of their respective owners.

SE3455/5455

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)
- Ideal for high pulsed current applications
- Mechanically and spectrally matched to SD3421/5421 photodiode, SD3443/5443/5491 phototransistor, SD3410/5410 photodarlington and SD5600 series Schmitt trigger



INFRA-83.TIF

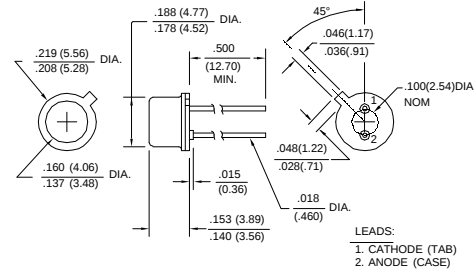
DESCRIPTION

The SE3455/5455 series consists of a gallium arsenide infrared emitting diode mounted in a TO-46 metal can package. The SE3455 series has flat window cans providing a wide beam angle, while the SE5455 series has glass lensed cans providing a narrow beam angle. These devices are constructed with dual bond wires suitable for pulsed current applications. The TO-46 packages offer high power dissipation capability and are ideally suited for operation in hostile environments.

OUTLINE DIMENSIONS in inches (mm)

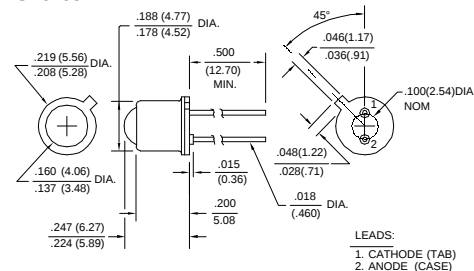
Tolerance	3 plc decimals	±0.005(0.12)
	2 plc decimals	±0.020(0.51)

SE3455



DIM_005a.ds4

SE5455



DIM_005b.ds4

SE3455/5455

GaAs Infrared Emitting Diode

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Total Power Output SE3455-001, SE5455-001 SE3455-002, SE5455-002 SE3455-003, SE5455-003 SE3455-004, SE5455-004	P _O	2.0 3.5 4.8 5.4			mW	I _F =100 mA
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 ⁽¹⁾ SE3455 SE5455	Ø		90 20		degr.	I _F =Constant
Radiation Rise And Fall Time	t _r , t _f		0.7		µs	

Notes

1. 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 (1µs pulse width, 300 pps)	3 A
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 reserves the right to make changes in order to improve design and supply the best products possible.

Honeywell

SE3455/5455

GaAs Infrared Emitting Diode

Fig. 1 Radiant Intensity vs Angular Displacement (SE3455) gra_017.ds4

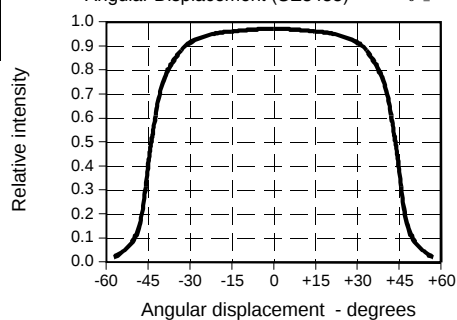


Fig. 2 Radiant Intensity vs Angular Displacement (SE5455) gra_023.ds4

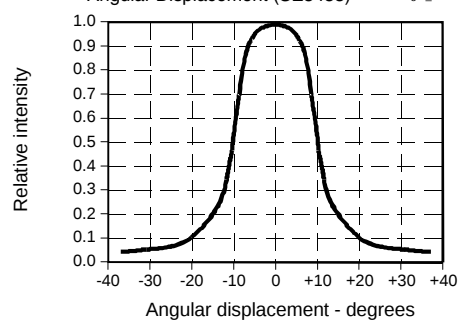


Fig. 3 Radiant Intensity vs Forward Current gra_018.ds4

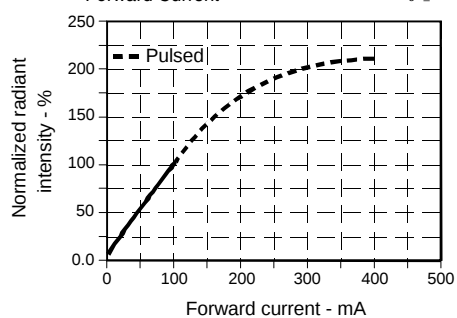


Fig. 4 Forward Voltage vs Forward Current gra_019.ds4

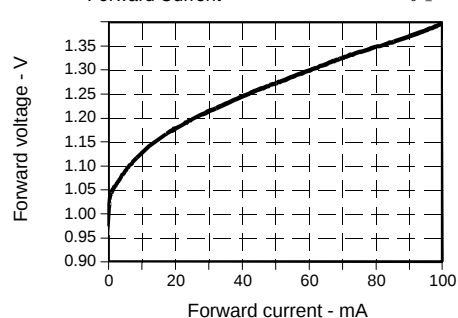


Fig. 5 Forward Voltage vs Temperature gra_020.ds4

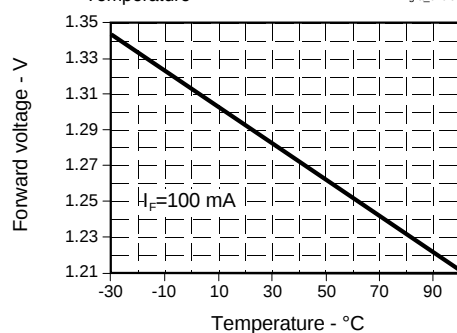
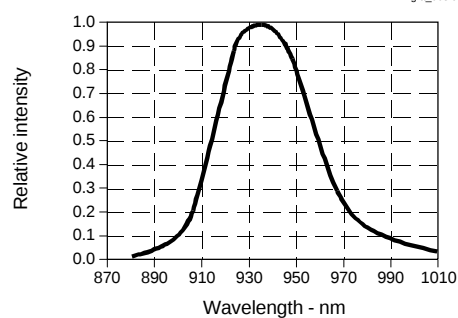


Fig. 6 Spectral Bandwidth gra_005.ds4



SE3455/5455

GaAs Infrared Emitting Diode

Fig. 7 Coupling Characteristics
SE3455 with SD3443

gra_021.ds4

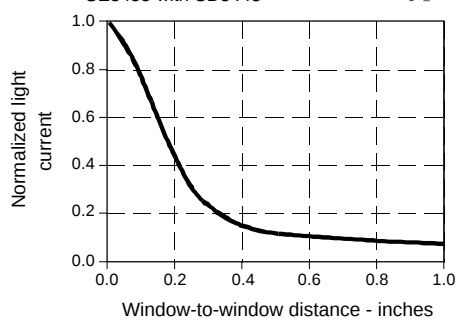


Fig. 8 Coupling Characteristics
SE5455 with SD5443

gra_024.ds4

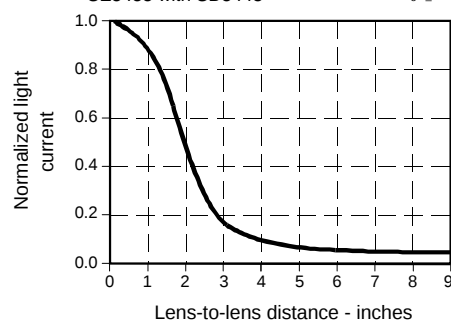
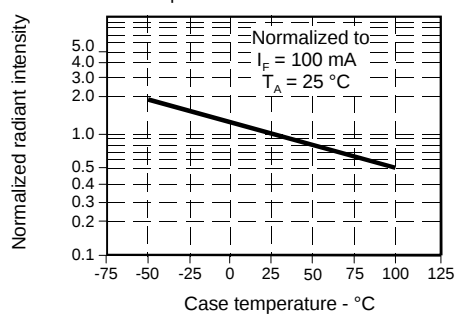


Fig. 9 Radiant Intensity vs
Case Temperature

gra_022.ds4



All Performance Curves Show Typical Values