

**62033 GaAs LIGHT EMITTING DIODE, TO-46 PACKAGE
(TYPE GS5040)**



Features:

- Hermetically sealed
- High output, 940nm
- Small package
- Spectrally matched to the 61058 series detector

Applications:

- Touch screen arrays
- Reflective sensors
- Position sensors
- Level sensors

DESCRIPTION

The **62033** is a P-N GaAs Infrared Light Emitting Diode in a TO-46 package and is spectrally matched to silicon phototransistors and photodarlington. Available binned to customer specifications and/or screened to MIL-PRF-19500.

ABSOLUTE MAXIMUM RATINGS 25°C FREE AIR TEMPERATURE UNLESS NOTED

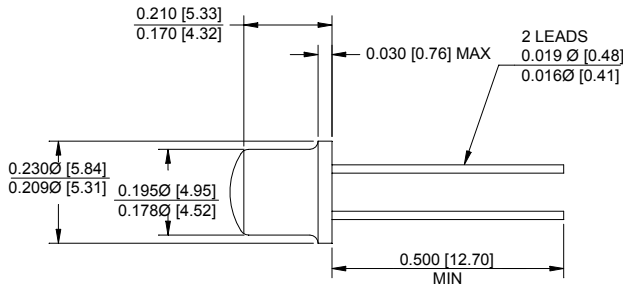
Storage Temperature.....	-40°C to +100°C
Operating Temperature	-40°C to +80°C
Reverse Voltage (at 25°C case temperature)	(See note 1) 2Vdc
Forward Current-Continuous	200mA
Soldering Temperature (1/16 inch from case for 10 seconds).....	240°C

NOTES:

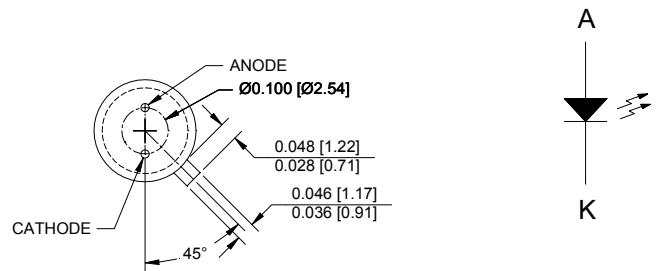
1. Derate linearly to 80°C case temperature at the rate of 3.6mA/°C.

Package Dimensions

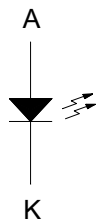
Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]



THE ANODE IS IN ELECTRICAL CONTACT WITH THE CASE



ELECTRICAL CHARACTERISTICS

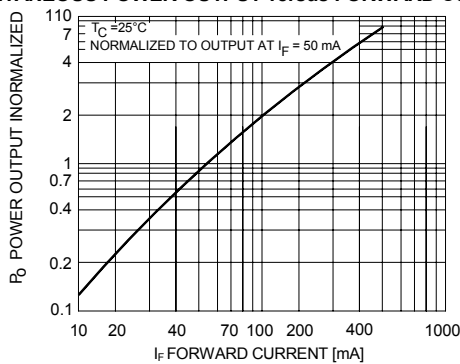
T_A = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	62033-X01	2.0	2.5			I _F = 100mA	
	62033-X02	P _O	3.5	4.2	mW		
	62033-X03		4.8	6.0			
Forward Voltage	62033-XXX	V _F		1.7	V	I _F = 100mA	
Reverse Breakdown Voltage	62033-XXX	B _{VR}	2		V	I _R = 10μA	
Radiation Rise Time	62033-XXX	t _R	0.7		μs		
Peak Wavelength	62033-XXX	λ _P	940		nm	I _F = 100mA	
Beam Angle	62033-XXX	θ	20		degrees		1
Forward Max Continuous Current	62033-XXX	I _{F(MAX)}		200	mA	25°C Case	

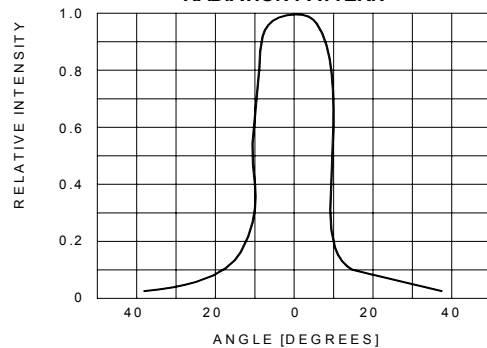
NOTES:

1. Angle between half-intensity points.

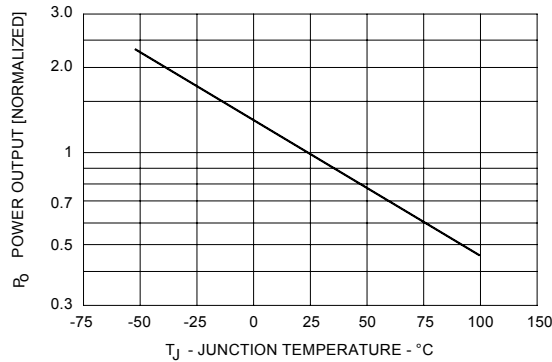
INSTANTANEOUS POWER OUTPUT versus FORWARD CURRENT



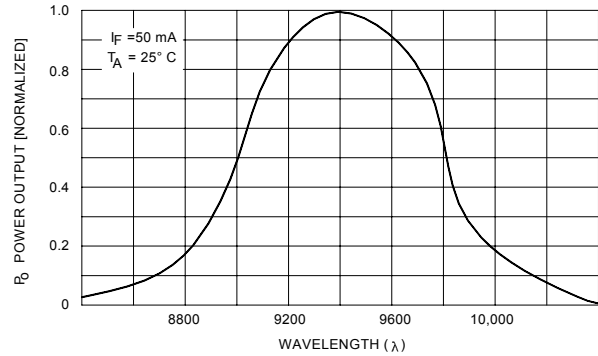
RADIATION PATTERN



POWER OUTPUT versus JUNCTION TEMPERATURE



RELATIVE SPECTRAL OUTPUT



RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	I _F	50	200	mA

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	P _O Range
62033-001	GS5040-1, GaAs LED in TO-46 package, commercial version	+2.0 mW
62033-101	GaAsLED in TO-46 package (-55° to +100°C) with 100% screening	+2.0 mW
62033-002	GS5040-2, GaAs LED in TO-46 package, commercial version	+3.5 mW
62033-102	GaAsLED in TO-46 package (-55° to +100°C) with 100% screening	+3.5 mW
62033-003	GS5040-3, GaAs LED in TO-46 package, commercial version	+4.8 mW
62033-103	GaAsLED in TO-46 package (-55° to +100°C) with 100% screening	+4.8 mW