

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

**Mii**  
OPTOELECTRONIC PRODUCTS  
DIVISION

## 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

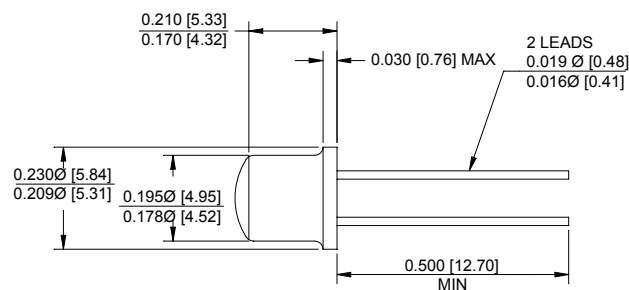
Storage Temperature.....	-40°C to +100°C
Operating Temperature .....	-40°C to +80°C
Reverse Voltage (at 25°C case temperature) .....	(See note 1) 2Vdc
Forward Current-Continuous .....	200mA
Soldering Temperature (1/16 inch from case for 10 seconds).....	240°C

## NOTES:

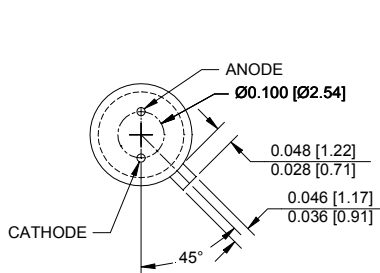
1. Derate linearly to 80°C case temperature at the rate of 3.6mA/°C.

## Package Dimensions

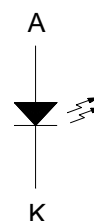
## Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]



THE ANODE IS IN ELECTRICAL CONTACT WITH THE CASE

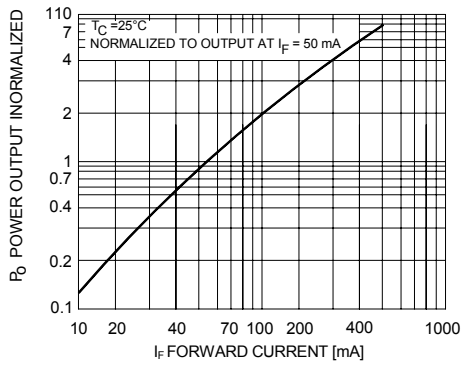
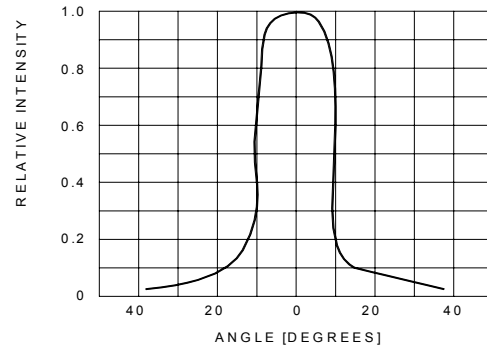
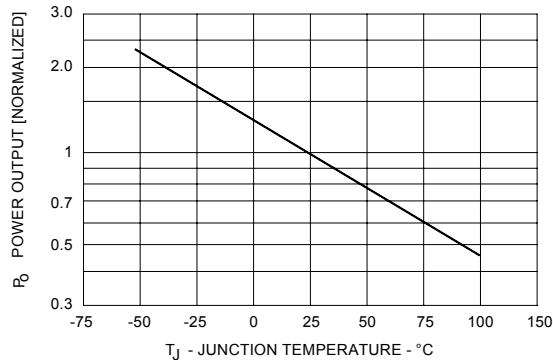
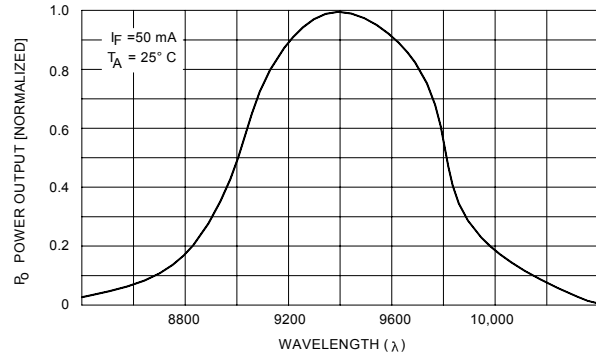


**ELECTRICAL CHARACTERISTICS** $T_A = 25^\circ\text{C}$  unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	62033-X01 62033-X02 62033-X03	2.0 3.5 4.8	2.5 4.2 6.0		mW	$I_F = 100\text{mA}$	
Forward Voltage	62033-XXX			1.7	V	$I_F = 100\text{mA}$	
Reverse Breakdown Voltage	62033-XXX	2			V	$I_R = 10\mu\text{A}$	
Radiation Rise Time	62033-XXX		0.7		$\mu\text{s}$		
Peak Wavelength	62033-XXX		940		nm	$I_F = 100\text{mA}$	
Beam Angle	62033-XXX		20		degrees		1
Forward Max Continuous Current	62033-XXX			200	mA	$25^\circ\text{C}$ Case	

**NOTES:**

- 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