

62033

TO-46 LIGHT EMITTING DIODE



06/30/03

Features:

- Hermetically sealed
- High output, 940nm
- Small package

Applications:

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

DESCRIPTION

The **62033** is a 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.

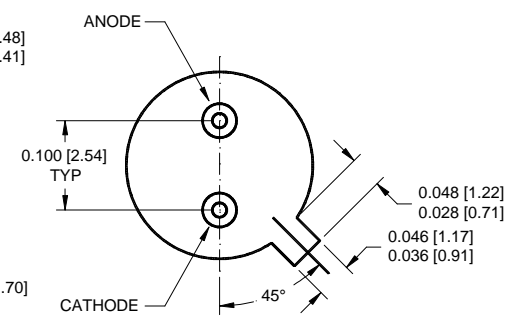
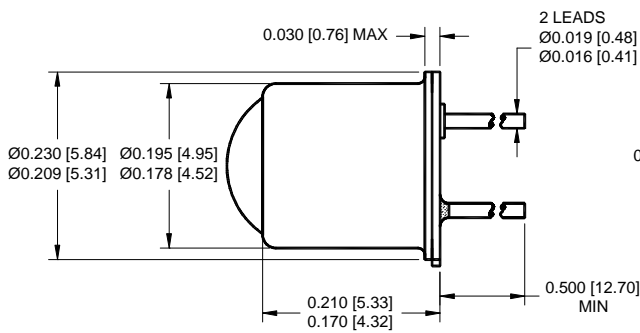
ABSOLUTE MAXIMUM RATINGS 25°C FREE AIR TEMPERATURE UNLESS NOTED

Reverse Voltage (at 25°C case temperature)	5 VDC
Forward Current-Continuous...(Note 1).....	240 mA
Power Dissipation(Note 2).....	250 mW
Storage Temperature.....	-65°C to +150°C
Operating Temperature.....	-55°C to +120°C
Soldering Temperature (10 seconds, 1/16" from case)	240°C

NOTES:

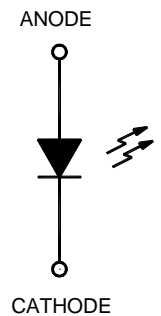
1. Derate linearly to 125°C case temperature at the rate of 2.0 mA/°C.
2. Derate linearly to 125°C case temperature at the rate of 2.5 mW/°C.

Package Dimensions



THE ANODE IS IN ELECTRICAL CONTACT WITH THE CASE.

Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

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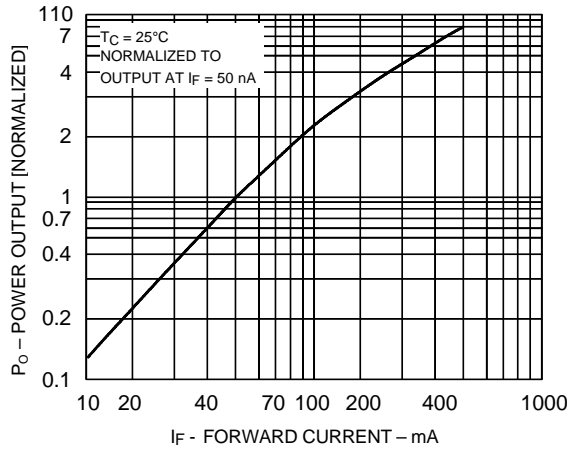
ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise specified.

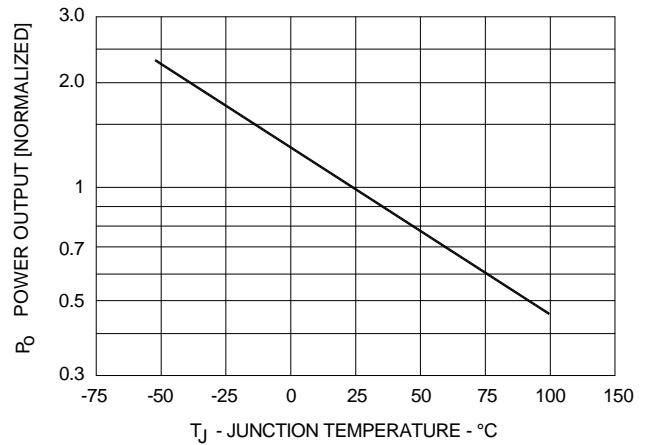
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	-X01	2.0				I _F = 100mA	
	-X02	3.5			mW		
	-X03	4.8					
Forward Voltage	V _F			1.7	V	I _F = 100mA	
Reverse Breakdown Voltage	B _{VR}	5			V	I _R = 10μA	
Radiation Rise Time	t _r		0.7		μs		
Peak Wavelength	λ _P		940		nm	I _F = 100mA	
Beam Angle	θ		20		degrees		1
Forward Max Continuous Current	I _{F(MAX)}			200	mA	25°C Case	

NOTES: 1. Angle between half-intensity points.

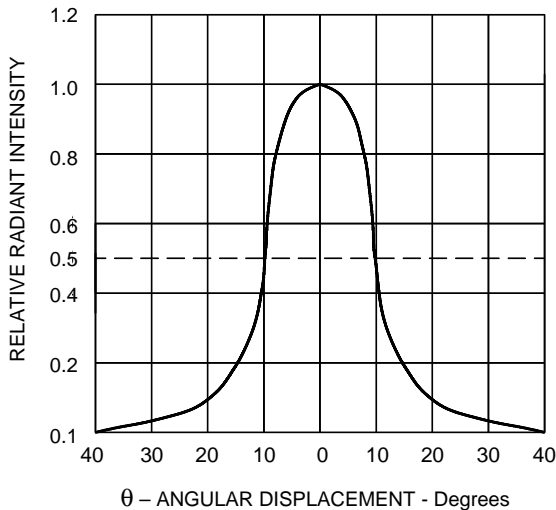
INSTANTANEOUS POWER OUTPUT versus FORWARD CURRENT



POWER OUTPUT versus JUNCTION TEMPERATURE



RELATIVE RADIANT INTENSITY vs ANGULAR DISPLACEMENT



RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	I _F	10	200	mA

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	P _O , MIN
62033-001	Commercial	2.0 mW
62033-101	Screened	2.0 mW
62033-002	Commercial	3.5 mW
62033-102	Screened	3.5 mW
62033-003	Commercial	4.8 mW
62033-003	Screened	4.8 mW