62111 LIGHT EMITTING DIODE "PIGTAIL"

MICROPAC
OPTOELECTRONIC PRODUCTS
DIVISION

09/22/03

Features:

- Hermetically sealed
- High output, 850nm
- Small package
- PC board mountable

Applications:

- Incremental encoding
- Reflective sensors
- Position sensors
- Level sensors

DESCRIPTION

The ***62111*** is a P-N GaAs Infrared Light Emitting Diode in a lensed coaxial package designed to be mounted in a single-clad printed circuit board. It is spectrally and mechanically matched to companion phototransistors and photodarlingtons with its narrow beam angle lens and small size which make it ideal for use in optical encoders, card reader arrays, etc. This device is also available with a lead attached to the case so that it may be connected without the use of a printed board. Available binned to customer specifications and/or screened to MIL-PRF-19500.

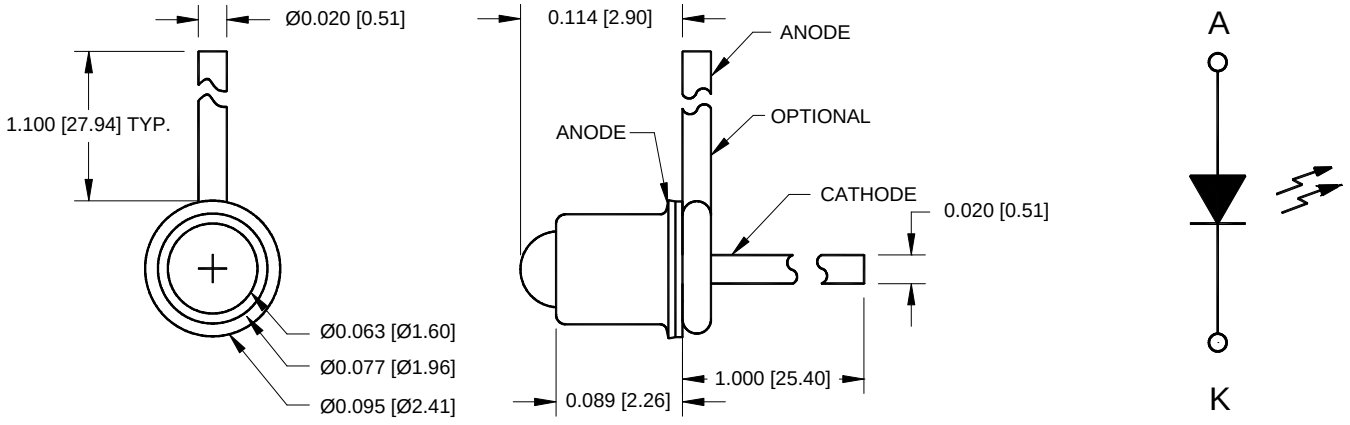
ABSOLUTE MAXIMUM RATINGS

Reverse Voltage	3 Vdc
Forward Current-Continuous (at 25°C case temperature)..(Note 1)	100 mA
Storage Temperature	-65°C to +150°C
Operating Temperature	-55°C to +125°C
Soldering Temperature (10 seconds, 1/16" from case)	240°C

NOTES:

1. Derate linearly to 125°C free-air temperature at the rate of 1mA/°C.

Package Dimensions **Schematic Diagram**



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

62111

LIGHT-EMITTING DIODE "PIGTAIL"

09/22/03

ELECTRICAL CHARACTERISTICS

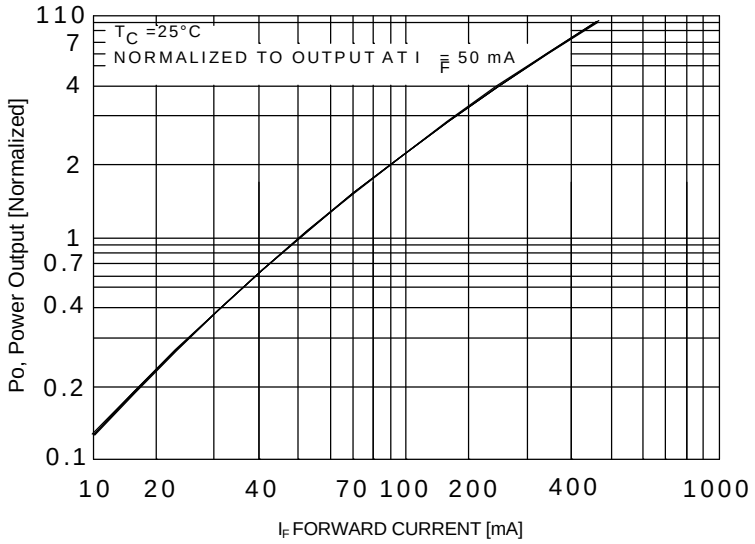
T_A = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	P_O	1.0			mW	I_F = 20mA	
Forward Voltage	V_F			1.8	V	I_F = 50mA	
Reverse Breakdown Voltage	B_{VR}	6			V	I_R = 8µA	
Radiation Rise Time	t_R		30		µs		
Peak Wavelength	λ_P		850		nm	I_F = 50mA	
Beam Angle	θ		12		degrees		1
Forward Max Continuous Current	$I_{F(MAX)}$			100	mA	25°C Case	

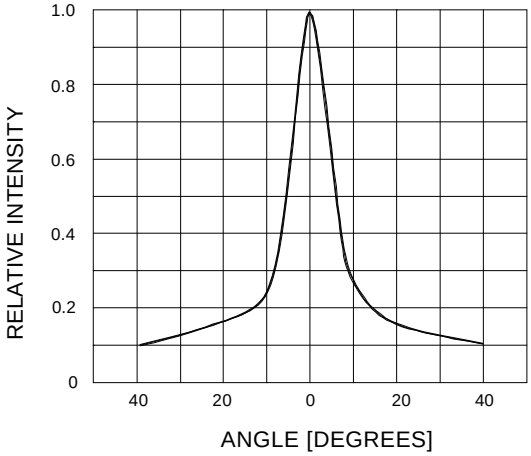
NOTES:

1. Angle between half-intensity points.

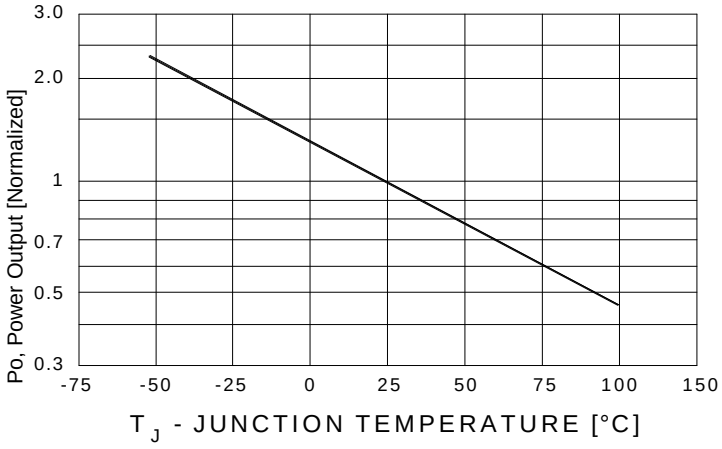
INSTANTANEOUS POWER OUTPUT versus FORWARD CURRENT



RADIATION PATTERN



POWER OUTPUT versus JUNCTION TEMPERATURE



RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	I_F	50	100	mA

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	P_O Range, MIN
62111-001	Pig tail, Commercial	1 mW
62111-001L	Loop Lead, Commercial	1 mW
62111-101	Pig tai, Screened	1 mW
62111-101L	Loop Lead, Screened	1 mW

MICROPAC INDUSTRIES, INC. OPTOELECTRONIC PRODUCTS DIVISION · 725 E.Walnut St., Garland, TX 75040 · (972)272-3571 · Fax (972)487-6918

www.micropac.com E-MAIL: OPTOSALES @ MICROPAC.COM