

62000

**GaAs LIGHT EMITTING DIODE "PILL PACK"
(TYPE GS1140)**

Mii

**OPTOELECTRONIC PRODUCTS
DIVISION**

Features:

- Hermetically sealed
- High output, 940nm
- Small package
- PC board mountable
- Spectrally matched to the 61055 series detector

Applications

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

DESCRIPTION

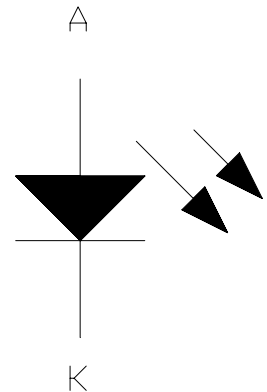
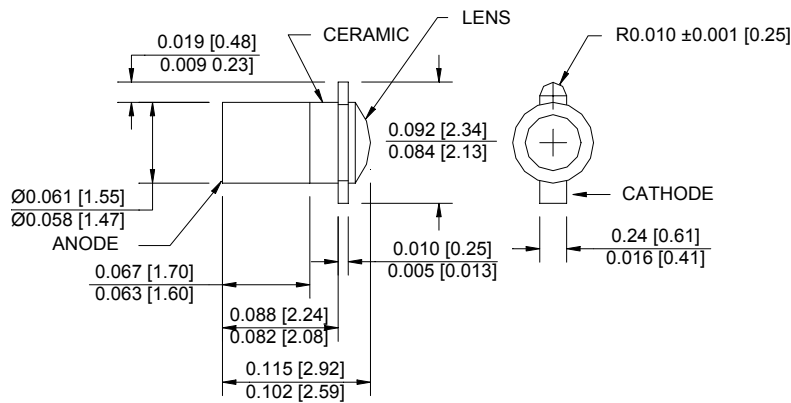
The **62000** is a P-N GaAs Infrared Light Emitting Diode in a lensed "pill" package designed to be mounted in a double-clad printed circuit board. It is spectrally and mechanically matched to companion phototransistors and photodarlington with its narrow beam angle lens and small size which make it ideal for use in optical encoders, card reader arrays, etc. Available binned to customer specifications and/or screened to MIL-PRF-19500.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature.....	-65°C to +150°C
Operating Temperature	-65°C to +125°C
Reverse Voltage(at 25°C case temperature)	2Vdc
Forward Current-Continuous	100mA
Soldering Temperature (3 Minutes)	240°C

Package Dimensions

Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

ELECTRICAL CHARACTERISTICS

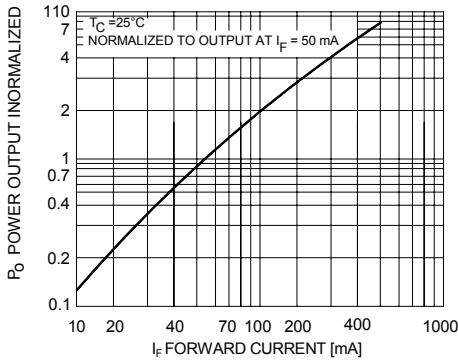
T_A = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	P _O	0.25	0.3		mW	I _F = 50mA	
		0.40	0.65				
		1.0	1.2				
		1.5	1.6				
Forward Voltage	V _F			1.6	V	I _F = 50mA	
Reverse Breakdown Voltage	B _{VR}	2			V	I _B = 10μA	
Radiation Rise Time	t _R		0.7		μs		
Peak Wavelength	λ _P		940		nm	I _F = 50mA	
Beam Angle	θ		20		degrees		1
Forward Max Continuous Current	I _{F(MAX)}			100	mA	25°C Case	

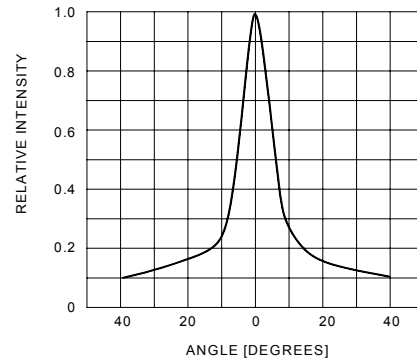
NOTES:

1. Low profile 40° lens also available.

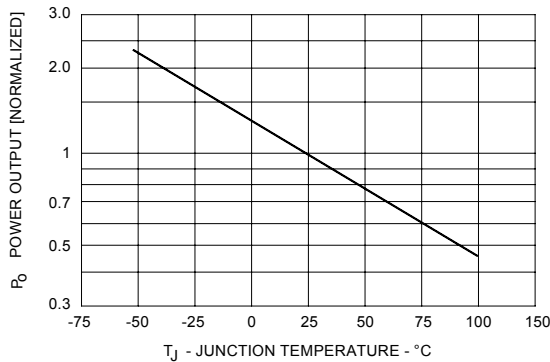
INSTANTANEOUS POWER OUTPUT versus FORWARD CURRENT



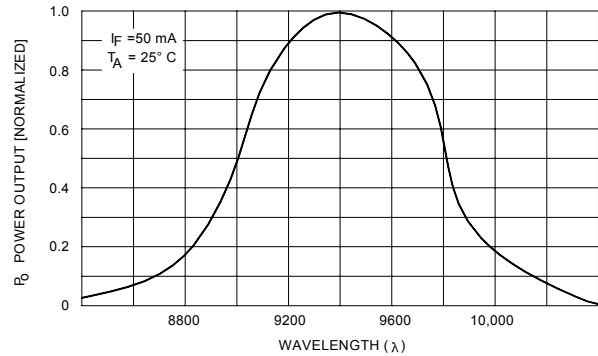
RADIATION PATTERN



POWER OUTPUT versus JUNCTION TEMPERATURE



RELATIVE SPECTRAL OUTPUT



RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	I_F	50	100	mA

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	P _o Range
62000-001	GaAs LED in pill package, commercial version	+0.25 mW
62000-101	GaAsLED in pill package (-55° to +100°C) with 100% screening	+0.25 mW
62000-002	GaAs LED in pill package, commercial version	+0.4 mW
62000-102	GaAsLED in pill package (-55° to +100°C) with 100% screening	+0.4 mW
62000-003	GaAs LED in pill package, commercial version	+1 mW
62000-103	GaAsLED in pill package (-55° to +100°C) with 100% screening	+1 mW
62000-004	GaAs LED in pill package, commercial version	+1.5 mW
62000-104	GaAsLED in pill package (-55° to +100°C) with 100% screening	+1.5 mW