62017 GaAs LIGHT EMITTING DIODE "PIGTAIL" (TYPE GS3040)	Mii OPTOELECTRONIC PRODUCTS DIVISION

Features:	Applications:
• Hermetically sealed • High output, 940nm • Small package • PC board mountable • Spectrally matched to the 61053 series detector	• Incremental encoding • Reflective sensors • Position sensors • Level sensors

DESCRIPTION

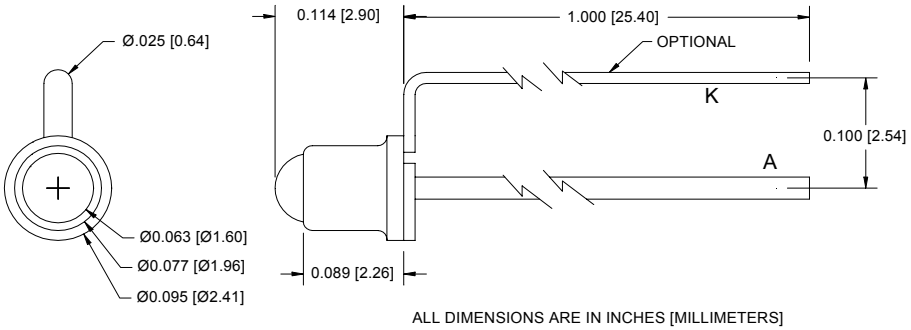
The ***62017*** is a P-N GaAs Infrared Light Emitting Diode in a lensed coaxial package designed to be mounted in a single-clad printed circuit board. It is spectrally and mechanically matched to companion phototransistors and photodarlingtons with its narrow beam angle lens and small size which make 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

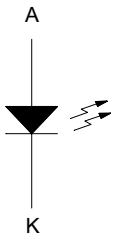
Storage Temperature .....-65°C to +150°C
Operating Temperature .....-65°C to +125°C
Reverse Voltage(at 25°C case temperature) .....(See note 1) 2Vdc
Forward Current-Continuous.....100mA
Soldering Temperature (3 Minutes) ..... 240°C

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]



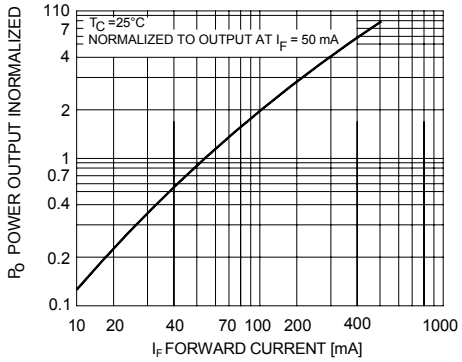
ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise specified.

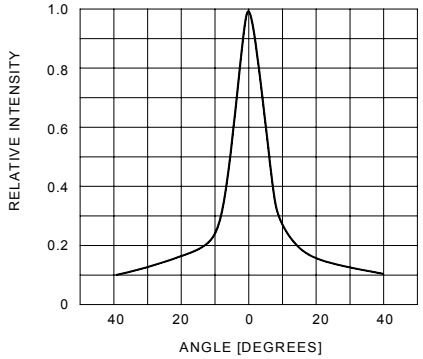
PARAMETER		SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	62017-X01 62017-X02 62017-X03 62017-X04	P_O	0.20 0.35 0.70 1.25	0.30 0.65 0.90 1.35		mW	I_F = 50mA	
Forward Voltage	62017-XXX	V_F			1.6	V	I_F = 50mA	
Reverse Breakdown Voltage	62017-XXX	B_{VR}	2			V	I_H = 10μA	
Radiation Rise Time	62017-XXX	t_R		0.7		μs		
Peak Wavelength	62017-XXX	λ_P		940		nm	I_F = 50mA	2
Beam Angle	62017-XXX	θ		12		degrees		1
Forward Max Continuous Current	62017-XXX	$I_{F(MAX)}$			100	mA	25°C Case	

NOTES:
1. Angle between half-intensity points.
2. Available in GaAlAs version (880)

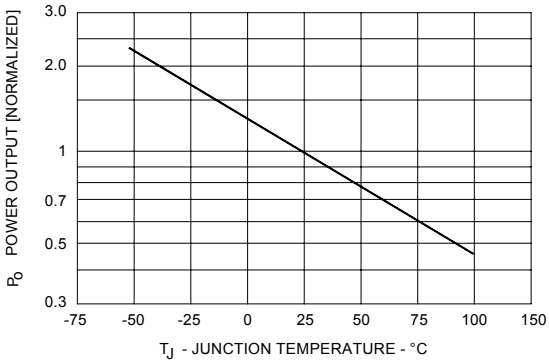
INSTANTANEOUS POWER OUTPUT versus FORWARD CURRENT



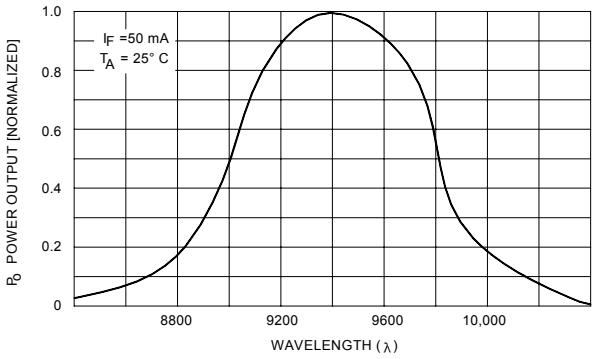
RADIATION PATTERN



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
62017-001	GaAs LED in coaxial package, commercial version	+0.20-+0.30 mW
62017-101	GaAsLED in coaxial package (-55° to +100°C) with 100% screening	+0.20 -+0.30 mW
62017-002	GaAs LED in coaxial package, commercial version	+0.35-+0.65 mW
62017-102	GaAsLED in coaxial package (-55° to +100°C) with 100% screening	+0.35-+0.65 mW
62017-003	GaAs LED in coaxial package, commercial version	+0.70-+0.90 mW
62017-103	GaAsLED in coaxial package (-55° to +100°C) with 100% screening	+0.70-+0.90 mW
62017-004	GaAs LED in coaxial package, commercial version	+1.25-+1.35 mW
62017-104	GaAsLED in coaxial package (-55° to +100°C) with 100% screening	+1.25-+1.35 mW

NOTE: Add L to end of dash number to signify addition of loop lead requirement.