

62005 GaAIAs LIGHT EMITTING DIODE "PILL PACK"

Mii
OPTOELECTRONIC PRODUCTS
DIVISION

REVISED 02/22/01

Features:

- Hermetically sealed
- High output, 880nm
- Small package
- PC board mountable
- Spectrally matched to the 61055 series detector

Applications:

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

DESCRIPTION

The **62005** is a P-N GaAIAs Infrared Light Emitting Diode in a package designed to be mounted in a double-clad printed circuit board. It is spectrally and mechanically matched to companion phototransistors and photodarlingtonts and is lensed to provide good light transfer and to minimize crosstalk. Available binned to customer specifications and/or screened to MIL-PRF-19500.

ABSOLUTE MAXIMUM RATINGS

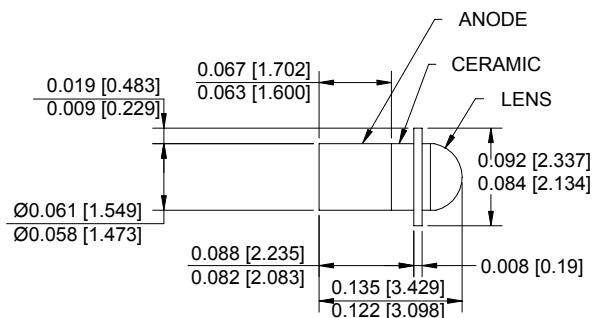
Storage Temperature.....	-65°C to +150°C
Operating Temperature	-55°C to +125°C
Reverse Voltage(at 25°C case temperature)	2Vdc
Forward Current – Continuous	(See note 1) 100mA
Soldering Temperature (10 Seconds)	240°C

NOTES:

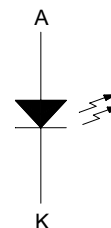
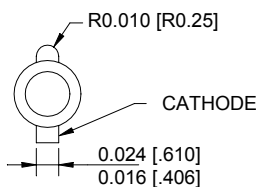
1. Derate linearly to 125°C free-air temperature at the rate of 1mA/°C.

Package Dimensions

Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]



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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Output Power	62005-X01 62005-X02 62005-X03 62005-X04	P_O	0.5 1 1.4 1.9	1.2 1.5 2.0 2.3	mW	$I_F = 50\text{mA}$	
Forward Voltage	62005-XXX	V_F		1.8	V	$I_F = 50\text{mA}$	
Reverse Breakdown Voltage	62005-XXX	B_{VR}	2		V	$I_R = 10\mu\text{A}$	
Radiation Rise Time	62005-XXX	t_R	0.7		μs		
Peak Wavelength	62005-XXX	λ_P	880		nm	$I_F = 50\text{mA}$	
Beam Angle	62005-XXX	θ	18		degrees		1
Forward Max Continuous Current	62005-XXX	$I_{F(\text{MAX})}$		100	mA	25°C Case	2

NOTES:

1. Low profile 40° lens also available.
2. Derate linearly above 25°C at $1.33\text{ mW}/^\circ\text{C}$

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	P_O MIN.
62005-001	GaAlAs LED in pill package, commercial version	+0.5 mW
62005-101	GaAlAs LED in pill package (-55° to $+125^\circ\text{C}$) with 100% screening	+0.5 mW
62005-002	GaAlAs LED in pill package, commercial version	+1mW
62005-102	GaAlAs LED in pill package (-55° to $+125^\circ\text{C}$) with 100% screening	+1 mW
62005-003	GaAlAs LED in pill package, commercial version	+1.4 mW
62005-103	GaAlAs LED in pill package (-55° to $+125^\circ\text{C}$) with 100% screening	+1.4 mW
62005-004	GaAlAs LED in pill package, commercial version	+1.9 mW
62005-104	GaAlAs LED in pill package (-55° to $+125^\circ\text{C}$) with 100% screening	+1.9 mW