

62087 HIGH OUTPUT 850 nm LIGHT EMITTING DIODE "PILL PACK"



10/05/06

Features:

- Hermetically sealed
- 850 nm
- Small package
- PC board mountable

Applications

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

DESCRIPTION

The **62087** is a high output 850 nm Infrared Light Emitting Diode in a lensed "pill" package designed to be mounted in a double-clad printed circuit board. With its narrow beam angle lens and small size which make it ideal for use in optical encoders, card reader arrays, etc. Available as a commercial device or screened to methods of MIL-PRF-19500.

ABSOLUTE MAXIMUM RATINGS

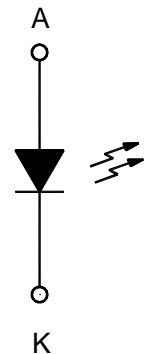
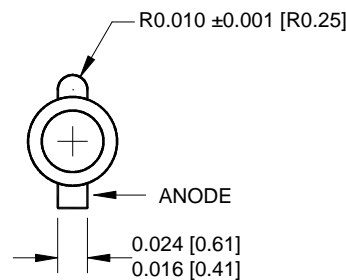
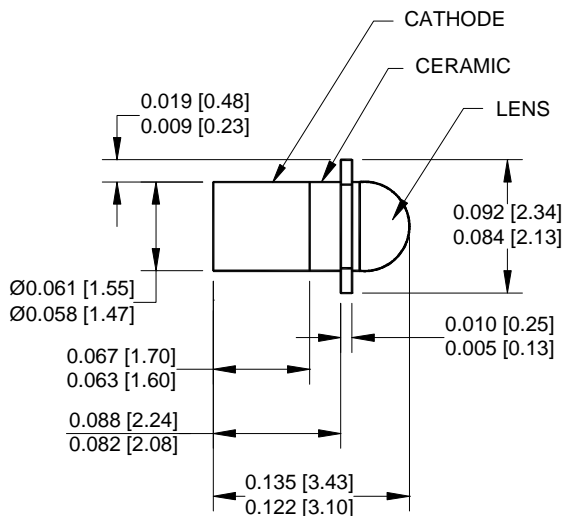
| | |
|--|-----------------|
| Reverse Voltage (at 25°C case temperature) | 5 Vdc |
| Forward Current-Continuous (Note 1) (at 25°C case temperature) | 100 mA |
| Storage Temperature | -65°C to +150°C |
| Operating Temperature | -55°C to +125°C |
| Soldering Temperature (10 seconds, 1/16" from case) | 240°C |

NOTES:

1. Derate linearly to 125°C case temperature at the rate of 1mA/°C above 25°C.

Package Dimensions

Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

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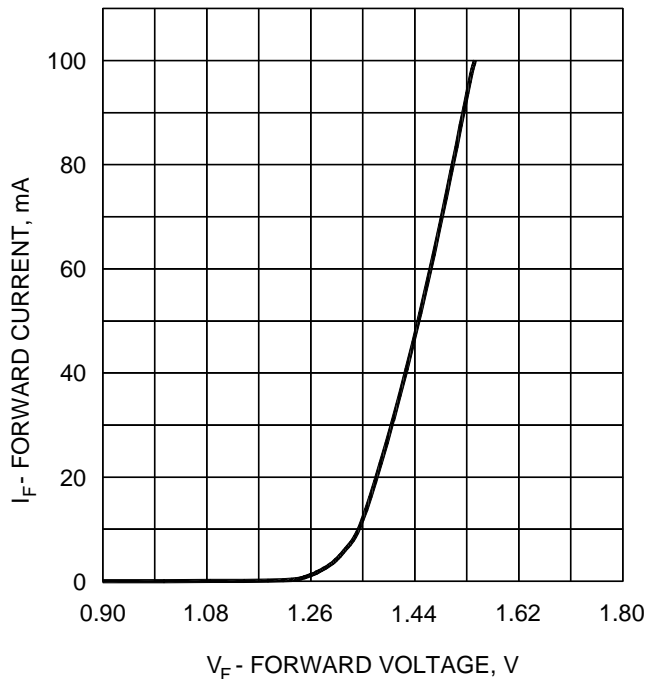
ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$ unless otherwise specified.

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNITS | TEST CONDITIONS | NOTE |
|--------------------------------|---------------------|-----|-----|-----|---------|-------------------------|------|
| Output Power | P_O | 1.8 | | | mW | $I_F = 50\text{mA}$ | |
| Forward Voltage | V_F | | | 1.8 | V | $I_F = 50\text{mA}$ | |
| Reverse Breakdown Voltage | B_{VR} | 5 | | | V | $I_B = 10\mu\text{A}$ | |
| Rise Time | t_R | 38 | | | ns | $I_F = 50\text{mA}$ | |
| Fall Time | t_F | 15 | | | ns | $I_F = 50\text{mA}$ | |
| Peak Wavelength | λ_P | | 850 | | nm | $I_F = 50\text{mA}$ | |
| Beam Angle | θ | | 20 | | degrees | | 1 |
| Forward Max Continuous Current | $I_{F(\text{MAX})}$ | | | 100 | mA | 25°C Case | |

NOTES:

1. Angle between half-intensity points.

**FORWARD VOLTAGE
vs
FORWARD CURRENT**

**RECOMMENDED OPERATING CONDITIONS:**

| PARAMETER | SYMBOL | MIN | MAX | UNITS |
|-----------------|--------|-----|-----|-------|
| Forward Current | I_F | | 50 | mA |

SELECTION GUIDE

| PART NUMBER | PART DESCRIPTION |
|-------------|------------------|
| 62087-001 | Commercial |
| 62087-101 | Screened |