

# GaAs HIGH POWER SIDE LOOK PACKAGE INFRARED EMITTING DIODE

**MIE-134A1-02**

## Description

The MIE-134A1-02 is a GaAs infrared emitting diode molded in clear, lensed side looking package.

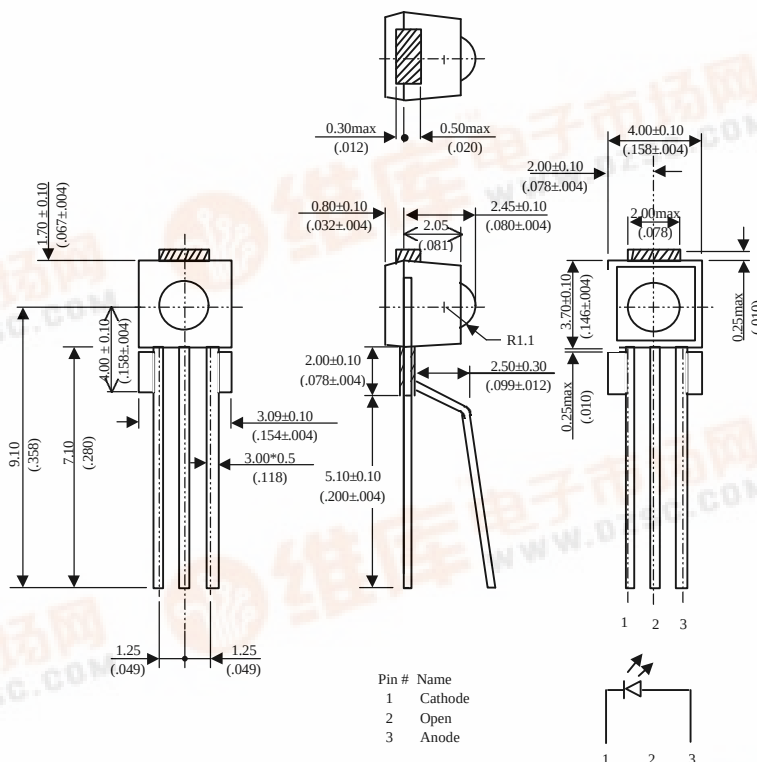
The MIE-134A1-02 provides a broad range of intensity selection .

## Package Dimensions

Unit: mm( inches )

## Features

- Selected to specific on-line intensity and radiant intensity ranges
- Low cost, plastic side looking package
- Mechanically and spectrally matched to The MID-13A45 of phototransistor .



### NOTES :

- All dimensions are in millimeters.(inches).
- Tolerance is  $\pm 0.25\text{mm}$  (.010") unless otherwise noted .
- Lead spacing is measured where the leads emerge from the package.

## Absolute Maximum Ratings

@  $T_A=25^\circ\text{C}$

| Parameter                   | Maximum Rating                              | Unit |
|-----------------------------|---------------------------------------------|------|
| Power Dissipation           | 75                                          | mW   |
| Peak Forward Current        | 1                                           | A    |
| Continuos Forward Current   | 50                                          | mA   |
| Reverse Voltage             | 5                                           | V    |
| Operating Temperature Range | $-55^\circ\text{C}$ to $+100^\circ\text{C}$ |      |
| Storage Temperature Range   | $-55^\circ\text{C}$ to $+100^\circ\text{C}$ |      |
| Lead Soldering Temperature  | $260^\circ\text{C}$ for 5 seconds           |      |

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12/23/1999

## Optical-Electrical Characteristics

@  $T_A=25^{\circ}\text{C}$

| Parameter          | Test Conditions   | Symbol          | Min. | Typ . | Max. | Unit                    |
|--------------------|-------------------|-----------------|------|-------|------|-------------------------|
| Radiant Incidance  | $I_F=20\text{mA}$ | $E_e$           | -    | 1.2   | -    | $\text{mW}/\text{cm}^2$ |
| Forward Voltage    | $I_F=20\text{mA}$ | $V_F$           | -    | 1.25  | 1.35 | V                       |
| Reverse Current    | $V_R=5\text{V}$   | $I_R$           | -    | -     | 100  | $\mu\text{A}$           |
| Peak Wavelength    | $I_F=20\text{mA}$ | $\lambda$       | -    | 940   | -    | nm                      |
| Spectral Bandwidth | $I_F=20\text{mA}$ | $\Delta\lambda$ | -    | 50    | -    | nm                      |
| View Angle         | $I_F=20\text{mA}$ | $2\theta_{1/2}$ | -    | 30    | -    | deg .                   |

## Typical Optical-Electrical Characteristic Curves

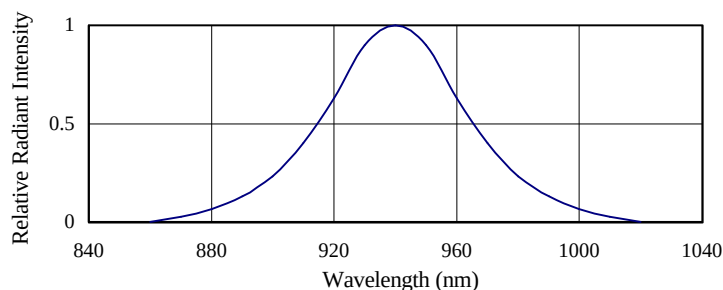


FIG.1 SPECTRAL DISTRIBUTION

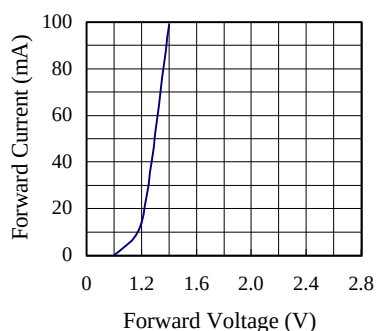


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

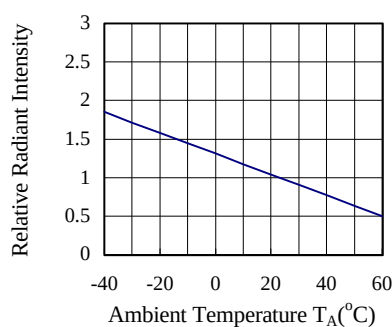


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

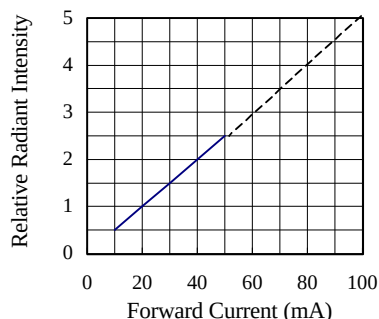


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

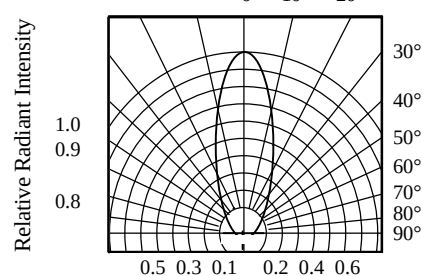


FIG.5 RADIATION DIAGRAM