

# AlGaAs/GaAs T-1 3/4 PACKAGE

## INFRARED EMITTING DIODE

**MIE-556A4U**

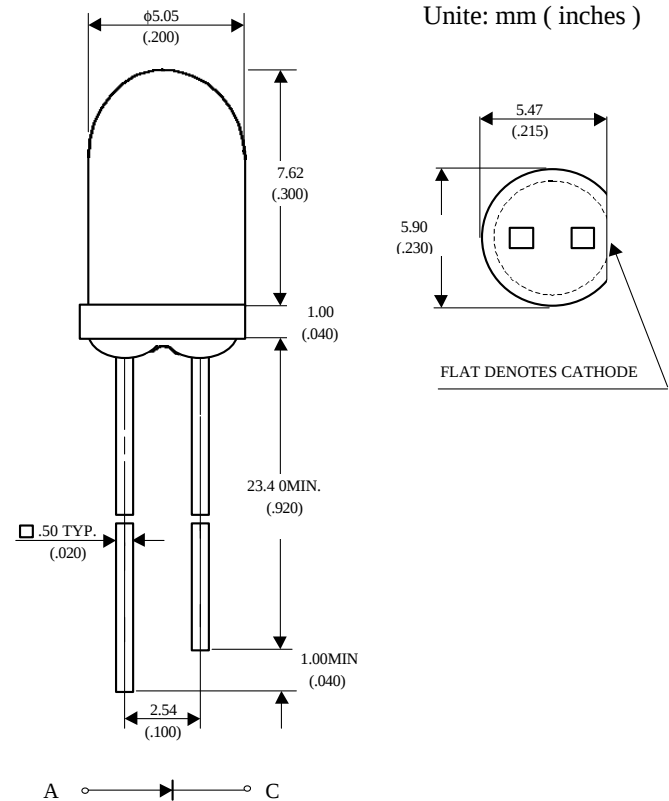
### Description

The MIE-556A4U is infrared emitting diodes in GaAs technology with AlGaAs window coating molded in pastel pink transparent package.

### Features

- High radiant power and high radiant intensity
- Standard T-1 3/4 (  $\phi$  5mm) package
- Peak wavelength  $\lambda_p = 940$  nm
- Good spectral matching to si-photodetector
- Radiant angle :  $55^\circ$

### Package Dimensions



Notes :

1. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
2. Protruded resin under flange is 1.5 mm (.059") max.
3. 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                             | 120                                         | mW   |
| Peak Forward Current(300pps,10 $\mu$ s pulse) | 1                                           | A    |
| Continuos Forward Current                     | 100                                         | 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          |      |

**UNI**

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11/17/2000

**Optical-Electrical Characteristics**

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

| Parameter          | Test Conditions      | Symbol          | Min. | Typ . | Max. | Unit          |
|--------------------|----------------------|-----------------|------|-------|------|---------------|
| Radiant Intensity  | $I_F = 20\text{mA}$  | $I_e$           |      | 1     | -    | mW/sr         |
| Forward Voltage    | $I_F = 50\text{mA}$  | $V_F$           |      | 1.3   | 1.5  | V             |
|                    | $I_F = 200\text{mA}$ |                 |      | 1.65  | 2.0  |               |
| 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         | $I_F = 20\text{mA}$  | $2\theta_{1/2}$ | -    | 55    | -    | deg.          |

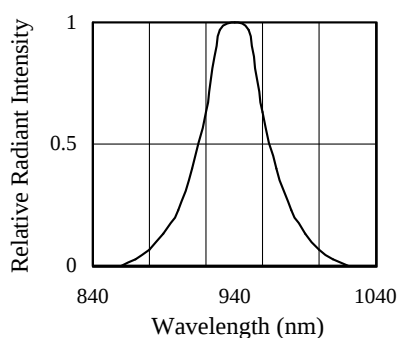
**Typical Optical-Electrical Characteristic Curves**


FIG.1 SPECTRAL DISTRIBUTION

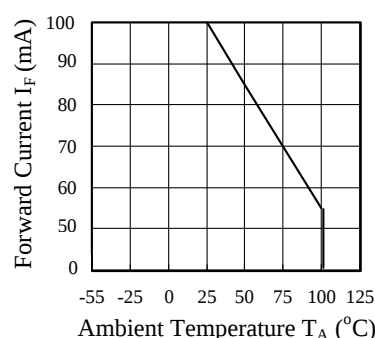


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

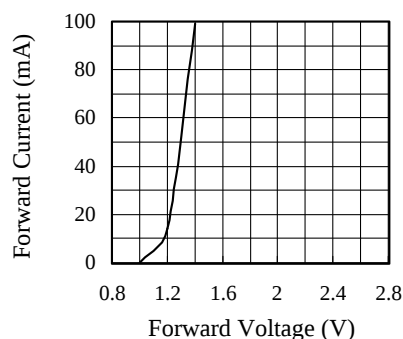


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

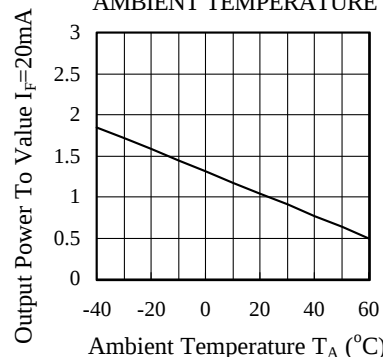


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

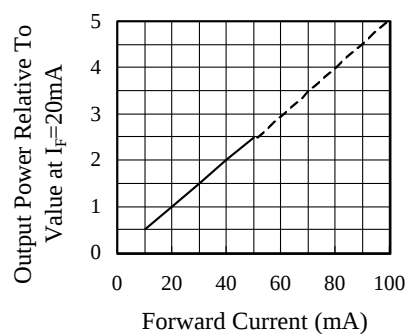


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

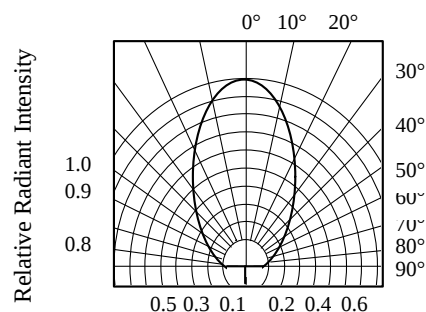


FIG.6 RADIATION DIAGRAM