

# AlGaAs/GaAs T-1 PACKAGE INFRARED EMITTING DIODE

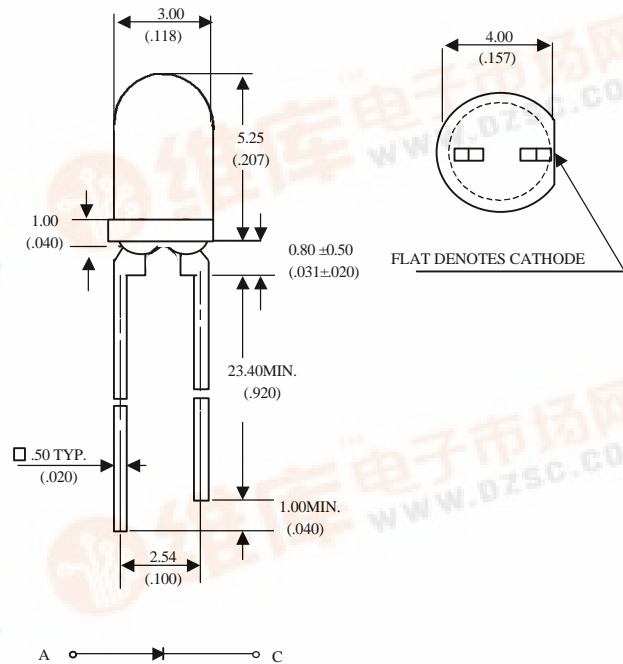
## MIE-334A4

### Description

The MIE-334A4 is an infrared emitting diode utilizing GaAs with AlGaAs window coating chip technology. It is molded in water clear plastic package.

### Package Dimensions

Unit : mm ( inches )



### Features

- High radiant power and high radiant intensity
- Suitable for DC and high pulse current operation
- Standard T-1 (  $\phi$  3mm ) package
- Peak wavelength  $\lambda_p = 940$  nm
- Good spectral matching to si-photodetector
- Radiant angle :  $\pm 15^\circ$

Notes :

1. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
2. Protruded resin under flange is 0.4 mm (.0157") 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	

## Optical-Electrical Characteristics

@ T<sub>A</sub>=25°C

Parameter	Test Conditions	Symbol	Min.	Typ .	Max.	Unit
Radiant Intensity	I <sub>F</sub> =20mA	I <sub>e</sub>	-	2.2	-	mW/sr
Forward Voltage	I <sub>F</sub> =50mA	V <sub>F</sub>	-	1.3	1.5	V
Reverse Current	V <sub>R</sub> =5V	I <sub>R</sub>	-	-	100	μA
Peak Wavelength	I <sub>F</sub> =20mA	λ <sub>p</sub>	-	940	-	nm
Spectral Bandwidth	I <sub>F</sub> =20mA	Δλ	-	50	-	nm
View Angle	I <sub>F</sub> =20mA	2θ <sub>1/2</sub>	-	30	-	deg .

## Typical Optical-Electrical Characteristic Curves

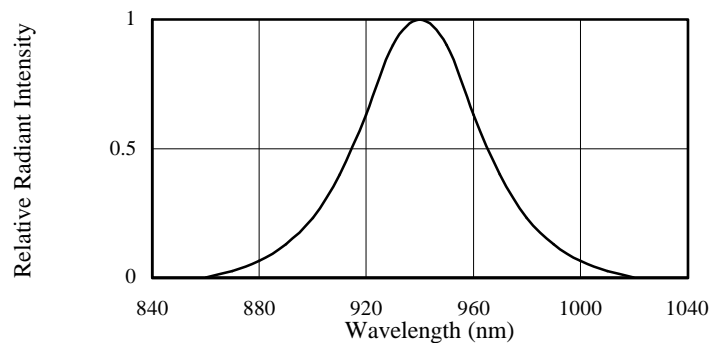


FIG.1 SPECTRAL DISTRIBUTION

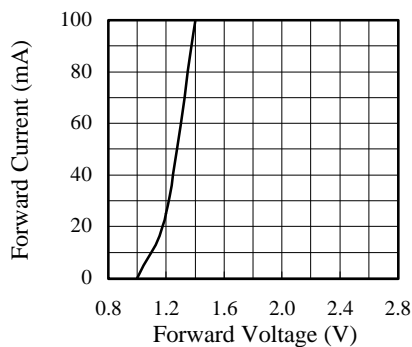


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

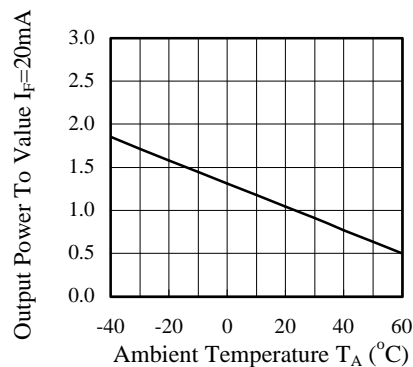


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

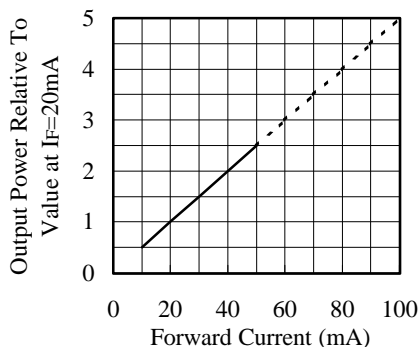


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

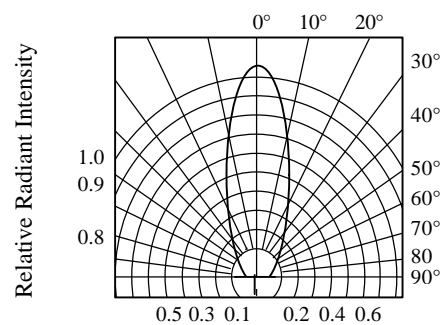


FIG.5 RADIATION DIAGRAM