

# AlGaAs/GaAs HIGH POWER T-1 PACKAGE INFRARED EMITTING DIODE

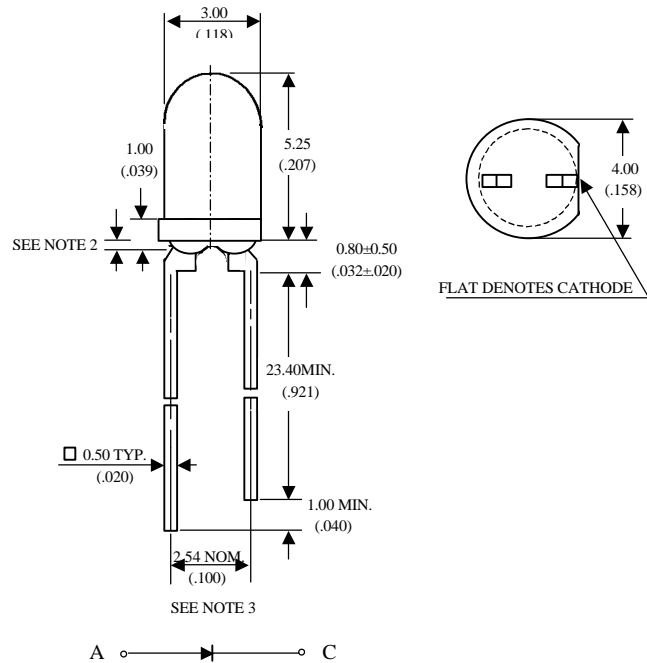
**MIE-304A4**

## Description

The MIE-304A4 is a high power infrared emitting diode in GaAs technology with AlGaAs window coating 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 (φ 3mm) package, radiation angle: 25°
- Peak wavelength  $\lambda_p = 940$  nm
- Good spectral matching to Si-Photodetector

### Notes :

1. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
2. Protruded resin under flange is 0.8 mm (.031") 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	1	A
Continuous Forward Current	100	mA
Reverse Voltage	5	V
Operating Temperature Range	-55°C to +100°C	
Storage Temperature Range	-55°C to +100°C	
Lead Soldering Temperature	260°C for 5 seconds	

**UNI**

Unity Opto Technology Co., Ltd.

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## 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>	1.3	2.5	-	mW/sr
Forward Voltage	I <sub>F</sub> =50mA	V <sub>F</sub>	-	1.30	1.50	V
Reverse Current	V <sub>R</sub> =5V	I <sub>R</sub>	-	-	100	μA
Peak Wavelength	I <sub>F</sub> =20mA	λ	-	940	-	nm
Spectral Bandwidth	I <sub>F</sub> =20mA	Δλ	-	50	-	nm
View Angle	I <sub>F</sub> =20mA	2θ <sub>1/2</sub>	-	25	-	deg .

## Typical Optical-Electrical Characteristic Curves

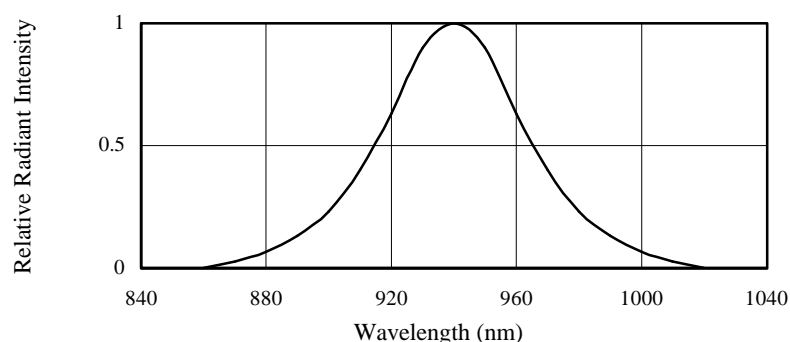


FIG.1 SPECTRAL DISTRIBUTION

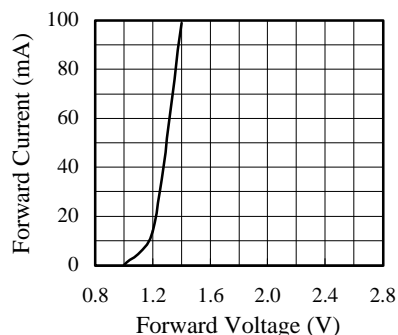


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

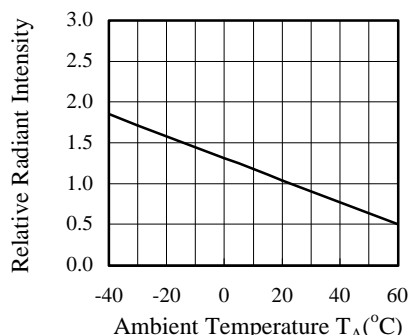


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

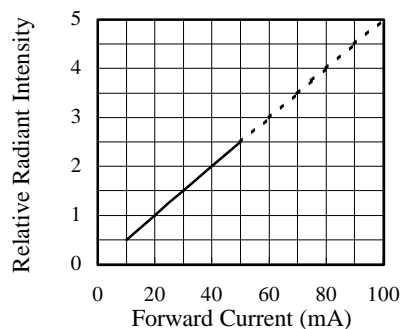


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

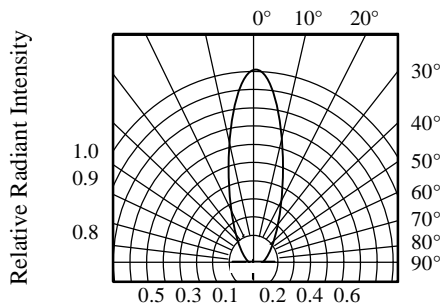


FIG.5 RADIATION DIAGRAM