

# GaAlAs T-1 PACKAGE INFRARED EMITTING DIODE

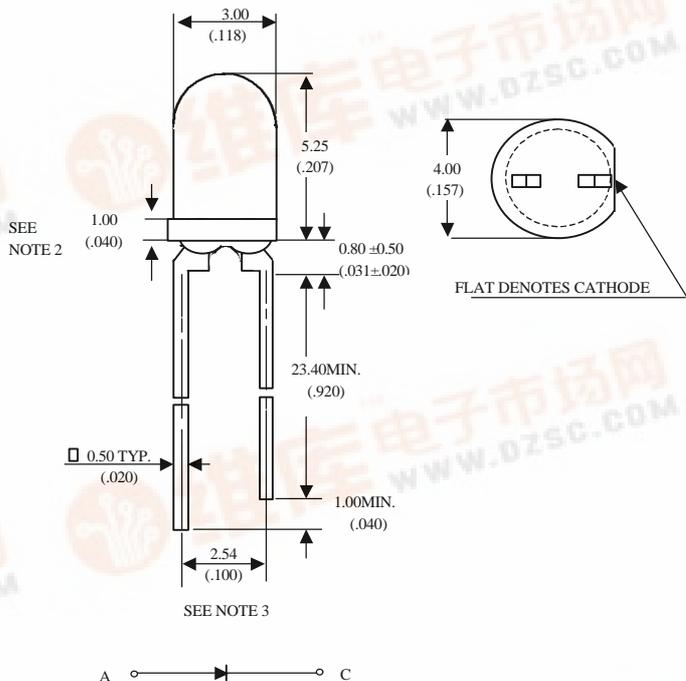
**MIE-304L3**

## Description

The MIE-304L3 is an infrared emitting diode in GaAlAs on GaAlAs technology molded in water clear plastic package.

## Package Dimensions

Unit : mm (inches )



## Features

- High power and high radiant intensity
- Suitable for DC and high pulse current operation
- Standard T-1 (  $\phi$  3mm ) package
- Peak wavelength  $\lambda_p = 880$  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(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>	-	1.40	1.7	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>	-	880	-	nm
Spectral Bandwidth	I <sub>F</sub> =20mA	Δλ	-	80	-	nm
View Angle	I <sub>F</sub> =20mA	2 θ <sub>1/2</sub>	-	25	-	deg .

Typical Optical-Electrical Characteristic Curves

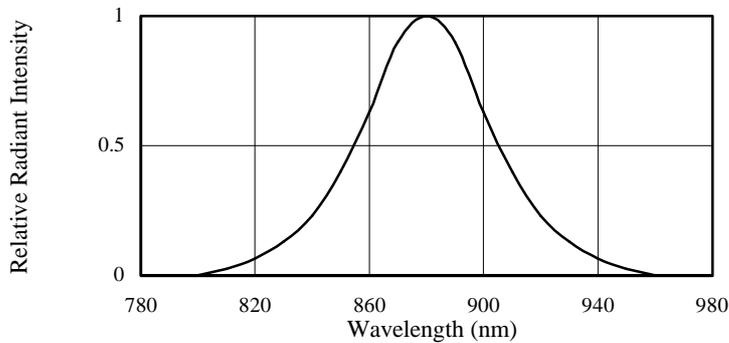


FIG.1 SPECTRAL DISTRIBUTION

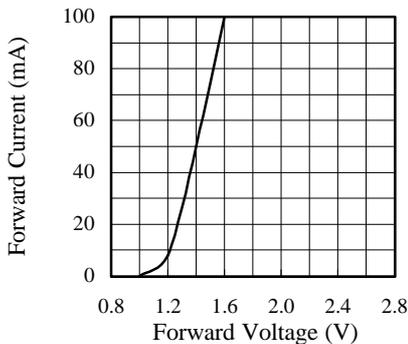


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

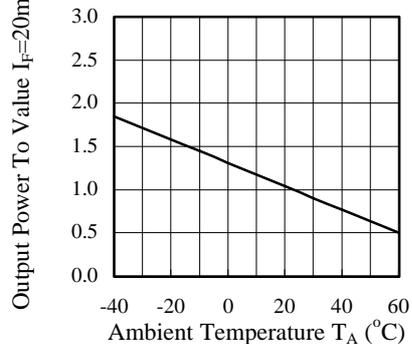


FIG.3 RELATIVE RADIANT INTENSITY VS.AMBIENT TEMPERATURE

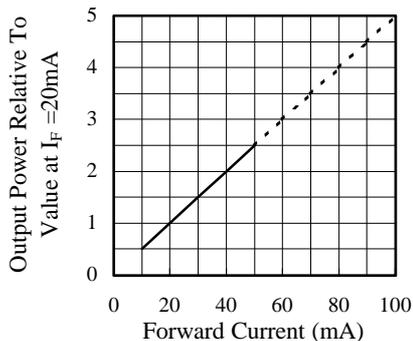


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

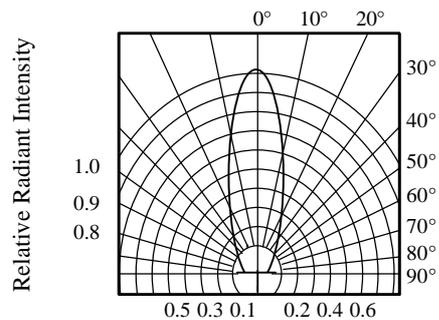


FIG.5 RADIATION DIAGRAM