

# GaAlAs T-1 PACKAGE INFRARED EMITTING DIODE

## MIE-334H4

### Description

The MIE-334H4 is a GaAlAs infrared LED having a peak wavelength at 850nm. It features ultra-high power, high response speed and molded package with higher radiant intensity. In addition to improving the S/N ratio in applied optical systems, the MIE-334H4 has greatly improved long-distance characteristics as well as significantly increased its range of applicability.

### Features

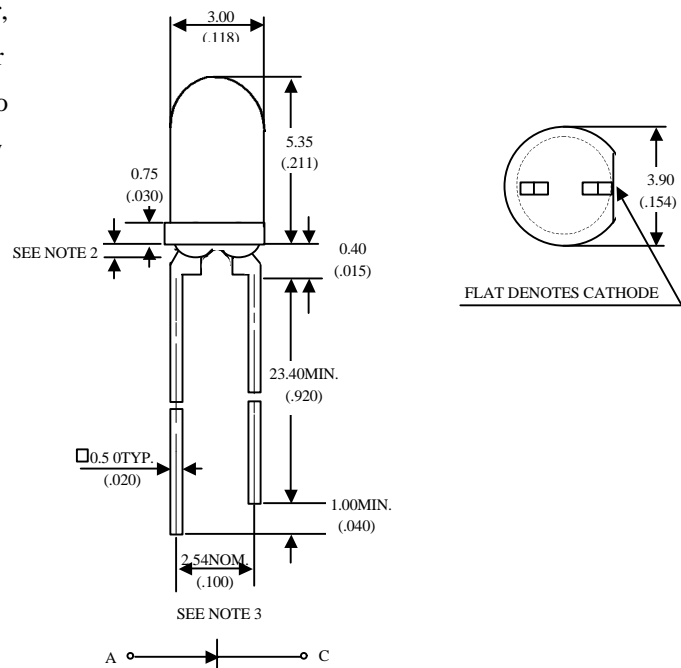
- Ultra-High radiant intensity
- High response speed
- Standard T-1 (  $\phi 3\text{mm}$  ) package, radiant angle :  $30^\circ$
- Peak wavelength  $\lambda_p = 850 \text{ nm}$
- Good spectral matching to si-photodetector

### Application

- Data communication
- SIR

### Package Dimensions

Unit : mm ( inches )



Notes :

1. Tolerance is  $\pm 0.25 \text{ mm}$  (.010") unless otherwise noted.
2. Protruded resin under flange is  $0.4 \text{ mm}$  (.015") 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	

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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>		3.2		mW/sr
Forward Voltage	I <sub>F</sub> =50mA	V <sub>F</sub>		1.5	1.8	V
Reverse Current	V <sub>R</sub> =5V	I <sub>R</sub>			100	μA
Peak Wavelength	I <sub>F</sub> =20mA	λ		850		nm
Spectral Bandwidth	I <sub>F</sub> =20mA	Δλ		30		nm
View Angle	I <sub>F</sub> =20mA	2 θ <sub>1/2</sub>		30		deg .

## Typical Optical-Electrical Characteristic Curves

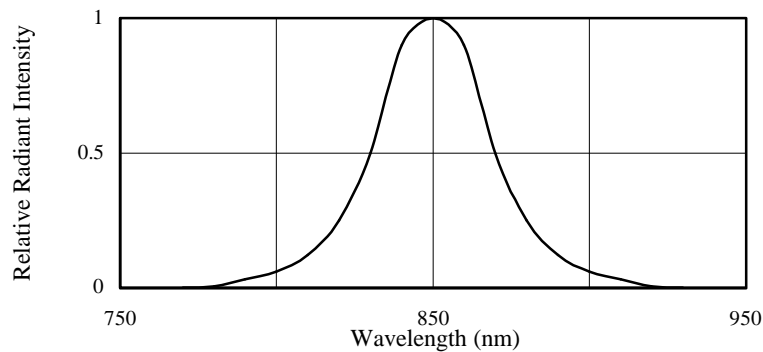


FIG.1 SPECTRAL DISTRIBUTION

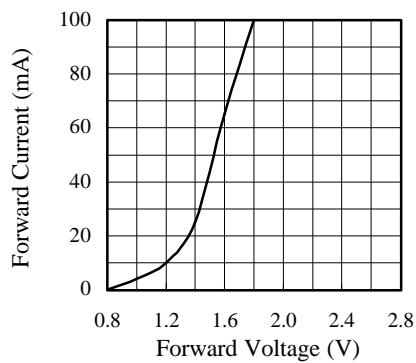


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

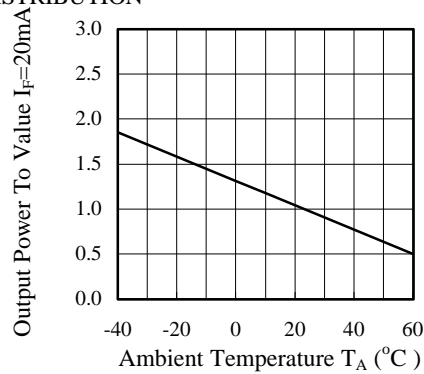


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

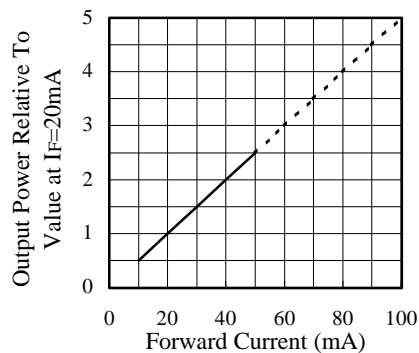


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

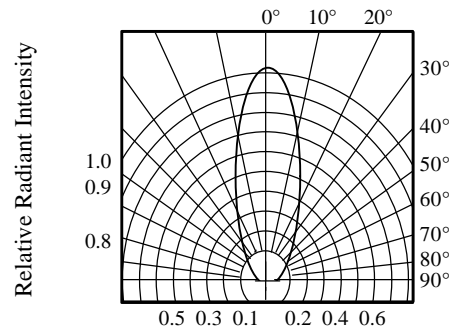


FIG.5 RADIATION DIAGRAM