

# GaAlAs/GaAs 1.8mm PACKAGE INFRARED EMITTING DIODE

## MIE-184A4

### Description

The MIE-184A4 is a high power infrared emitting diode in GaAs technology with AlGaAs window coating molded in water clear plastic package.

### Features

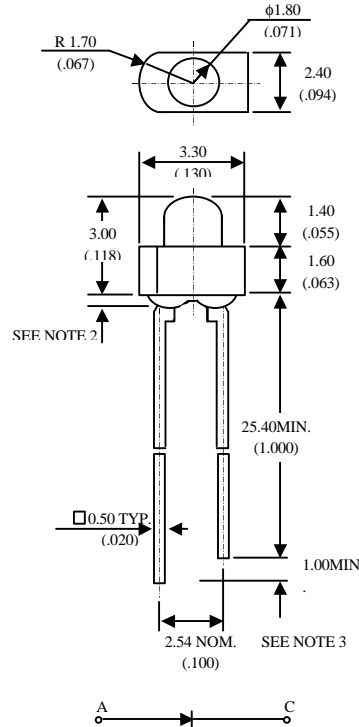
- High radiant power and high radiant intensity
- Suitable for DC and high pulse current operation
- Special 1.8mm package, radiation angle: 35°
- Peak wavelength  $\lambda_p = 940 \text{ nm}$
- Good spectral matching to Si-Photodetector

### 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 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	100	mW
Peak Forward Current(300pps,10 $\mu$ s pulse)	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.

02/04/2002

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		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>			10	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	2 θ <sub>1/2</sub>		35		deg .

Typical Optical-Electrical Characteristic Curves

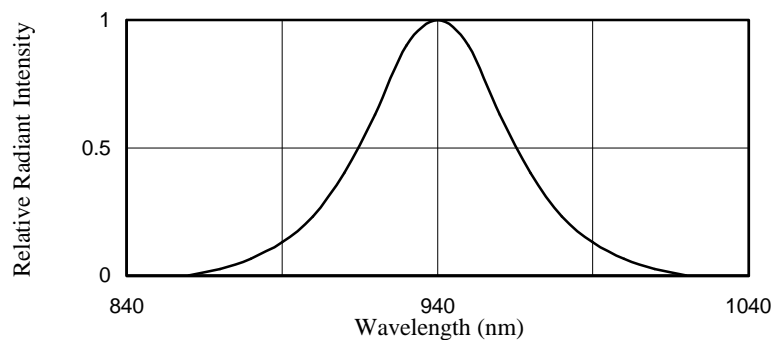


FIG.1 SPECTRAL DISTRIBUTION

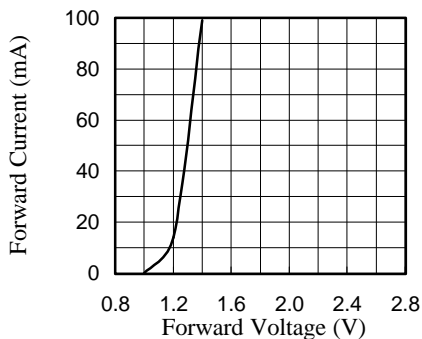


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

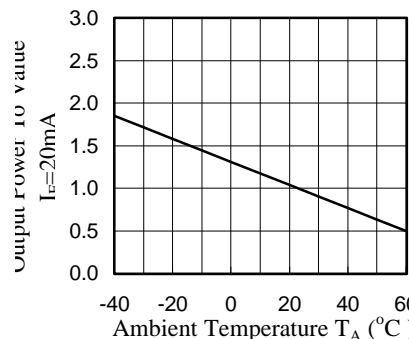


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

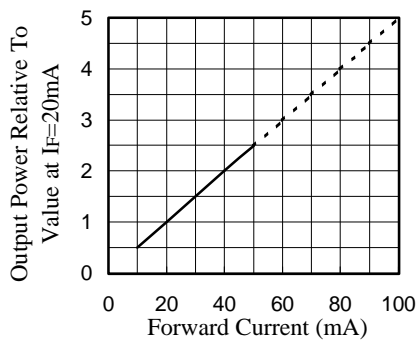


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

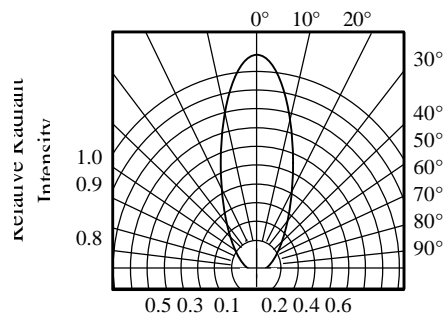


FIG.5 RADIATION DIAGRAM