

# GaAlAs HIGH POWER TO-46 PACKAGE INFRARED EMITTING DIODE

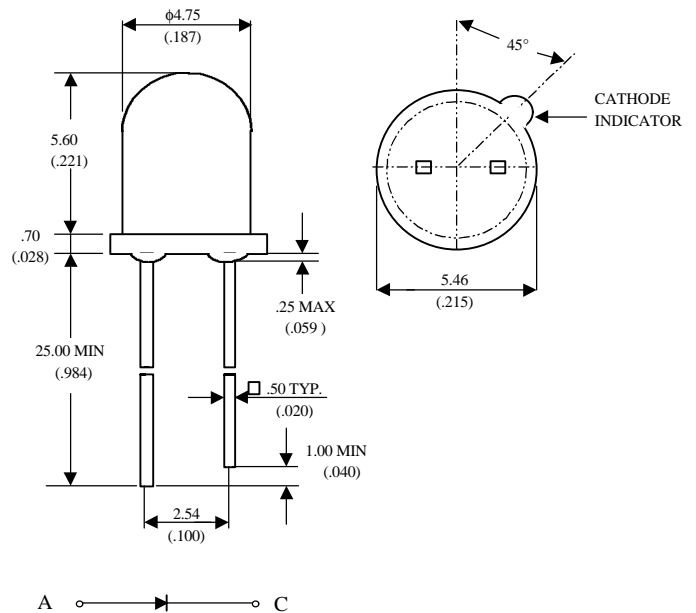
## MIE-406L3U

### Description

The MIE-406L3U is an infrared emitting diode with GaAlAs / GaAlAs die technology molded in a pastel blue transparent plastic package.

### Package Dimensions

Unit : mm ( inches )



### Features

- Standard TO-46 package
- Peak wavelength  $\lambda_p = 880$  nm
- Good spectral matching to si-photodetector
- Radiant angle : 25°

### Notes :

1. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
2. Protruded resin under flange is 1.5 mm (.059") 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
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**

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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>	-	2.2	-	mW/sr
Forward Voltage	I <sub>F</sub> =50mA	V <sub>F</sub>	-	1.4	1.70	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	2θ <sub>1/2</sub>	-	25	-	deg.

## Typical Optical-Electrical Characteristic Curves

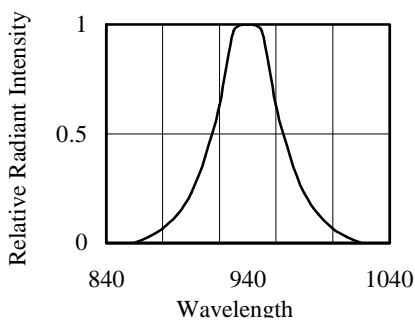


FIG.1 SPECTRAL DISTRIBUTION

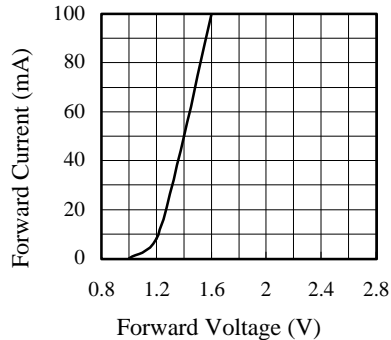


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

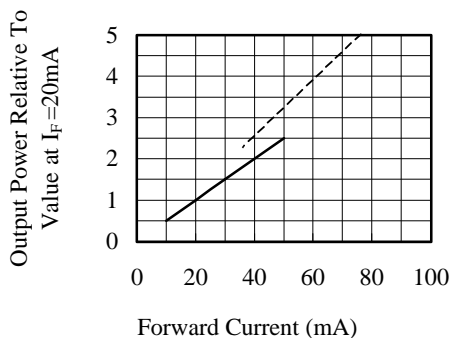


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

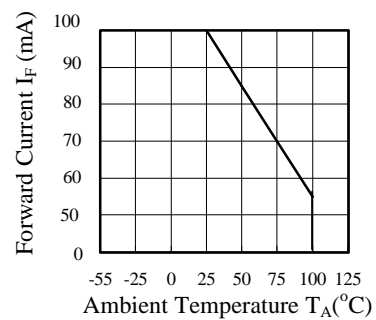


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

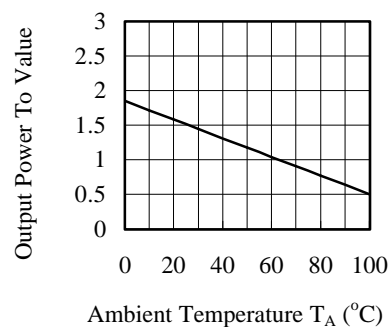


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

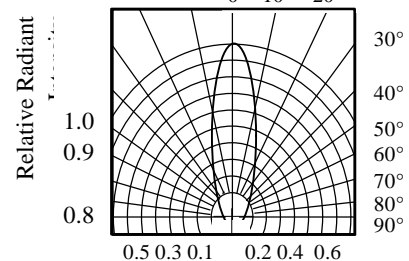


FIG.6 RADIATION DIAGRAM