

# GaAlAs T-1 3/4 PACKAGE INFRARED EMITTING DIODE

**MIE-546L3U**

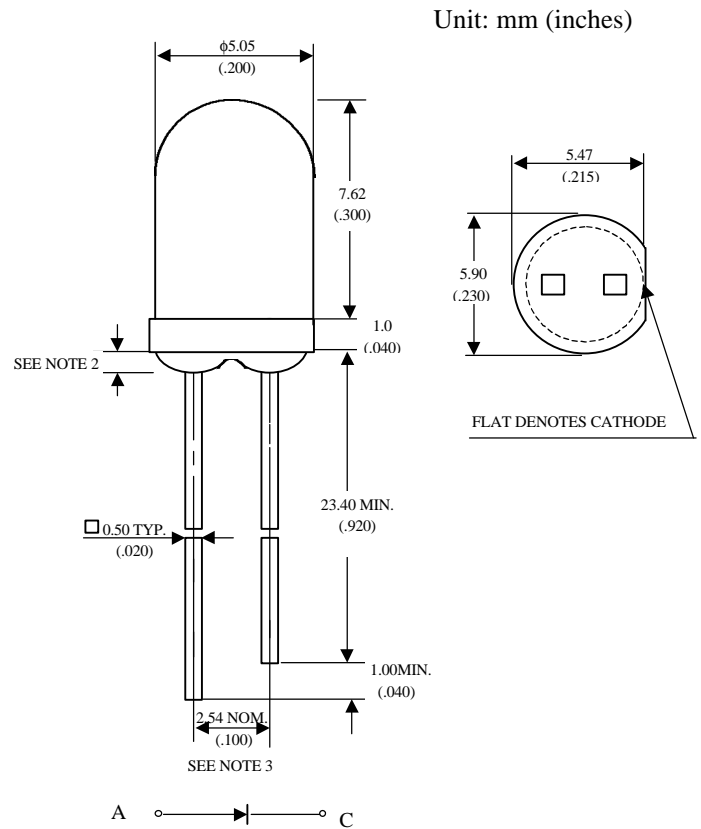
## Description

The MIE-546L3U is infrared emitting diodes in GaAlAs technology molded in pastel blue transparent package.

## Features

- Suitable for DC and high pulse current operation
- Standard T-1 3/4 (φ 5mm) package
- Peak wavelength  $\lambda_p = 880 \text{ nm}$
- Good spectral matching to si-photodetector
- Radiant angle :  $40^\circ$

## Package Dimensions



Notes :

1. Tolerance is  $\pm 0.25 \text{ mm}$  (.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
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	

**UNI**

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11/18/2000

## Optical-Electrical Characteristics

@  $T_A=25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Min.	Typ .	Max.	Unit
Radiant Intensity	$I_F=20\text{mA}$	$I_e$		1.2	-	mW/sr
Forward Voltage	$I_F=50\text{mA}$	$V_F$		1.4	1.7	V
	$I_F=200\text{mA}$			1.85	2.10	
Reverse Current	$V_R=5\text{V}$	$I_R$			100	$\mu\text{A}$
Peak Wavelength	$I_F=20\text{mA}$	$\lambda$		880		nm
Spectral Bandwidth	$I_F=20\text{mA}$	$\Delta\lambda$		60		nm
View Angle	$I_F=20\text{mA}$	$2\theta_{1/2}$	-	40	-	deg.

### Typical Optical-Electrical Characteristic Curves

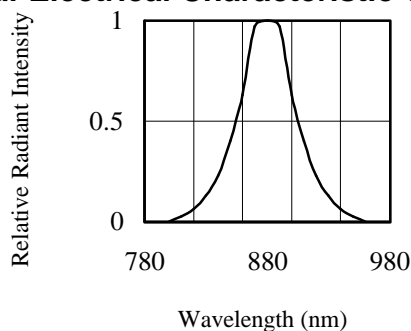


FIG.1 SPECTRAL DISTRIBUTION

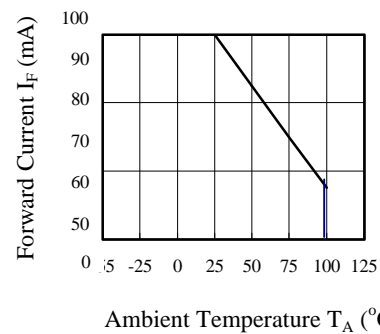


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

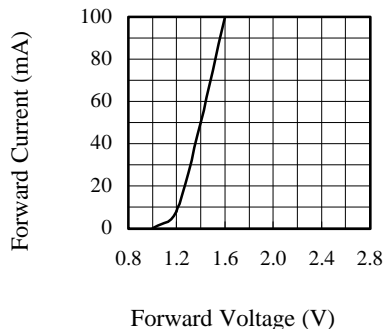


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

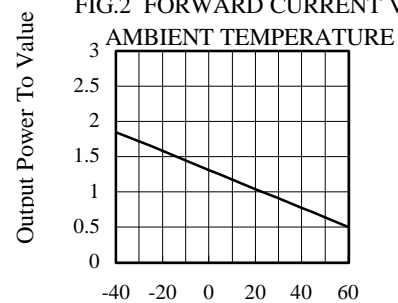


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

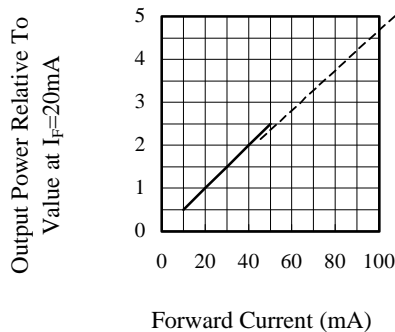


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

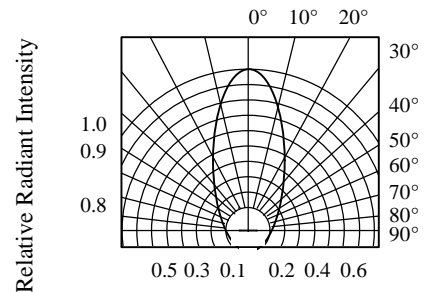


FIG.5 RADIATION DIAGRAM