

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

## MIE-546L3U

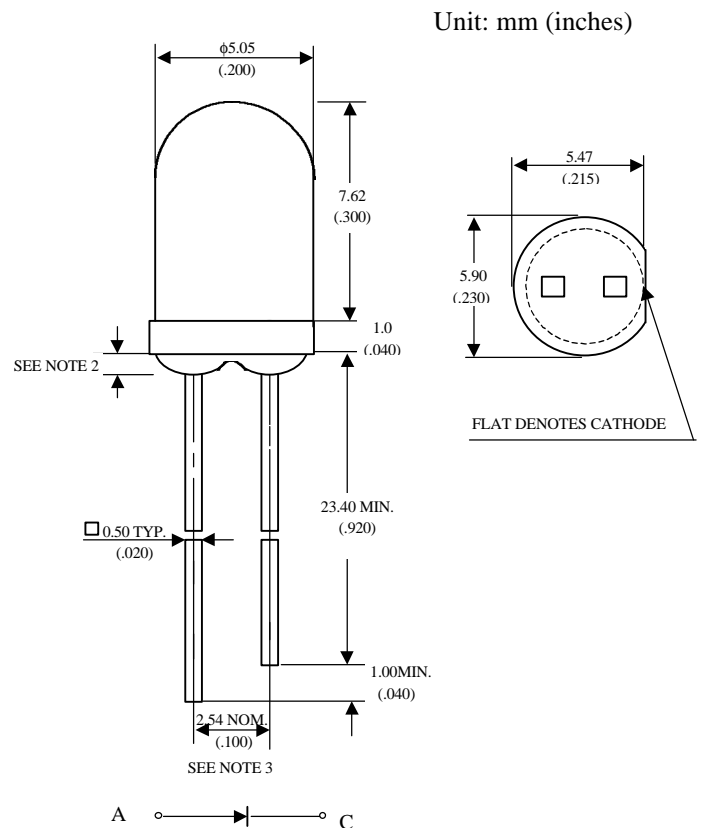
### Description

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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## 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>		1.2	-	mW/sr
Forward Voltage	I <sub>F</sub> =50mA	V <sub>F</sub>		1.4	1.7	V
	I <sub>F</sub> =200mA			1.85	2.10	
Reverse Current	V <sub>R</sub> = 5V	I <sub>R</sub>			100	μA
Peak Wavelength	I <sub>F</sub> =20mA	λ		880		nm
Spectral Bandwidth	I <sub>F</sub> =20mA	Δλ		60		nm
View Angle	I <sub>F</sub> =20mA	2θ <sub>1/2</sub>	-	40	-	deg.

### Typical Optical-Electrical Characteristic Curves

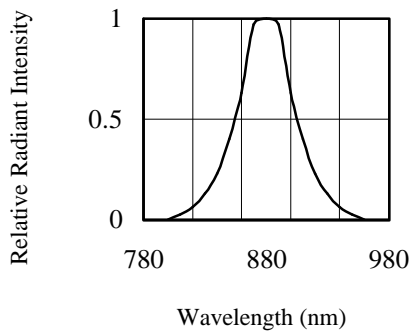


FIG.1 SPECTRAL DISTRIBUTION

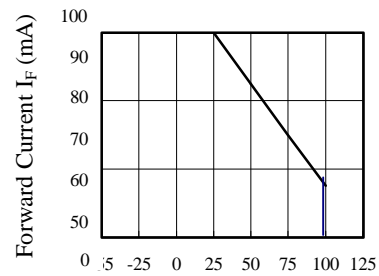


FIG.2 FORWARD CURRENT I<sub>F</sub> (mA) VS. AMBIENT TEMPERATURE T<sub>A</sub> (°C)

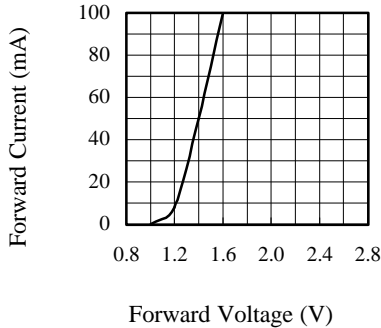


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

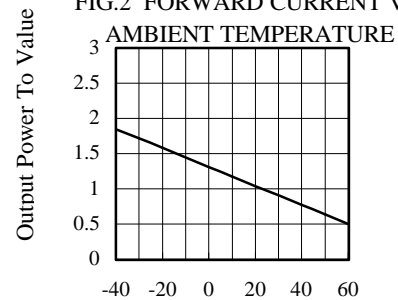


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE T<sub>A</sub> (°C)

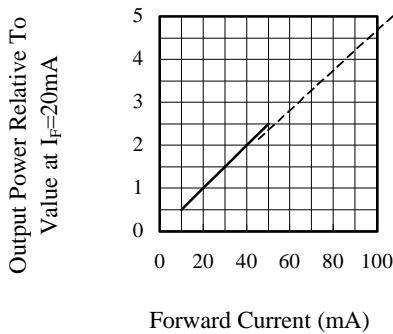


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

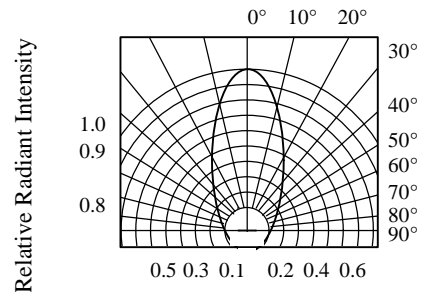


FIG.5 RADIATION DIAGRAM