

AlGaAs/GaAs T-1 PACKAGE

INFRARED EMITTING DIODE

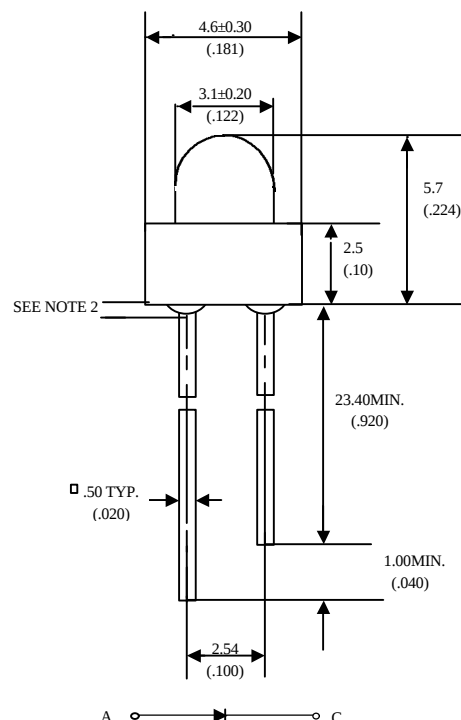
MIE-384A4

Description

The MIE-384A4 is an infrared emitting diode utilizing GaAs with AlGaAs window coating chip technology. It is molded in water clear plastic package.

Package Dimensions

Unit : mm (inches)



Features

- High radiant power and high radiant intensity
- Suitable for DC and high pulse current operation
- Special T-1 (ϕ 3mm) package
- Peak wavelength $\lambda_p = 940$ nm
- Good spectral matching to si-photodetector
- Radiant angle : $\pm 14^\circ$

Notes :

1. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
2. Protuded resin under flange is 0.4 mm (.0157") 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	1	A
Continuous Forward Current	100	mA
Reverse Voltage	5	V
Operating Temperature Range	-55°C to $+100^\circ\text{C}$	
Storage Temperature Range	-55°C to $+100^\circ\text{C}$	
Lead Soldering Temperature	260 $^\circ\text{C}$ for 5 seconds	

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02/04/2002

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		2.0	-	mW/sr
Forward Voltage	$I_F=50\text{mA}$	V_F	-	1.3	1.5	V
Reverse Current	$V_R=5\text{V}$	I_R	-	-	100	μA
Peak Wavelength	$I_F=20\text{mA}$	λ_p	-	940	-	nm
Spectral Bandwidth	$I_F=20\text{mA}$	$\Delta\lambda$	-	50	-	nm
View Angle	$I_F=20\text{mA}$	$2\theta_{1/2}$	-	28	-	deg .

Typical Optical-Electrical Characteristic Curves

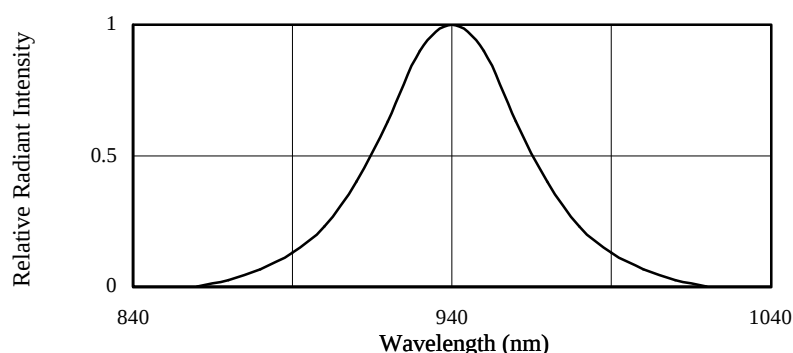


FIG.1 SPECTRAL DISTRIBUTION

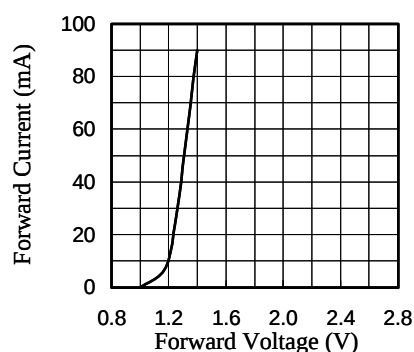


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

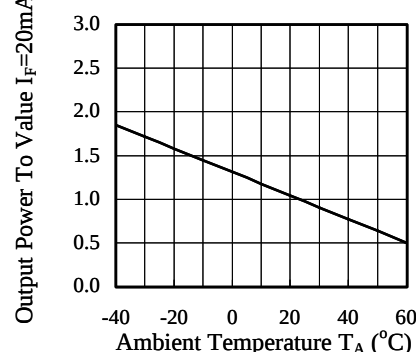


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

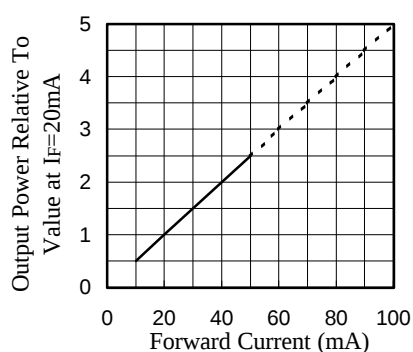


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

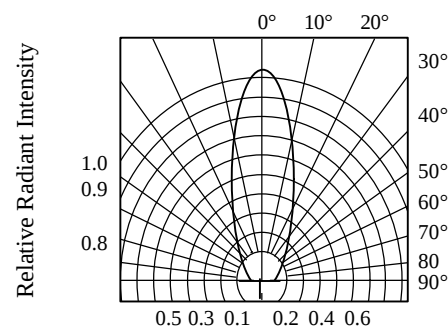


FIG.5 RADIATION DIAGRAM