

T-1 PACKAGE

INFRARED EMITTING DIODE

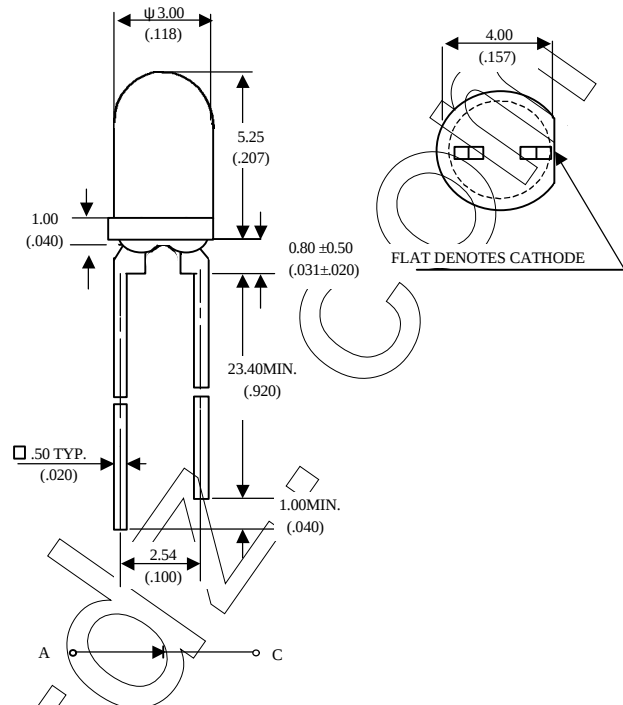
YC-314A1

Description

The YC-314A1 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
- Standard T-1 (ϕ 3mm) package
- Peak wavelength $\lambda_p = 940$ nm
- Good spectral matching to si-photodetector
- Radiant angle : $\pm 15^\circ$

Notes:

1. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
2. Protruded 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(300pps,10 μ s pulse)	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	

Optical-Electrical Characteristics

@ T_A=25°C

Parameter	Test Conditions	Symbol	Min.	Typ .	Max.	Unit
Radiant Intensity	I _F =20mA	I _e	-	2.2	-	mW/sr
Forward Voltage	I _F =50mA	V _F	-	1.3	1.5	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Peak Wavelength	I _F =20mA	λ _p	-	940	-	nm
Spectral Bandwidth	I _F =20mA	Δλ	-	50	-	nm
View Angle	I _F =20mA	2θ _{1/2}	-	30	-	deg .

Typical Optical-Electrical Characteristic Curves

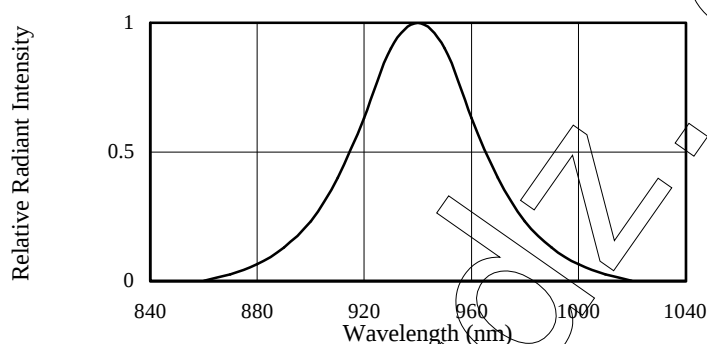


FIG.1 SPECTRAL DISTRIBUTION

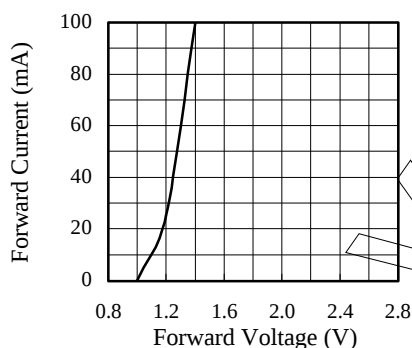


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

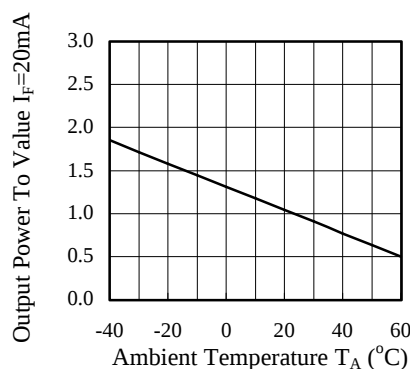


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

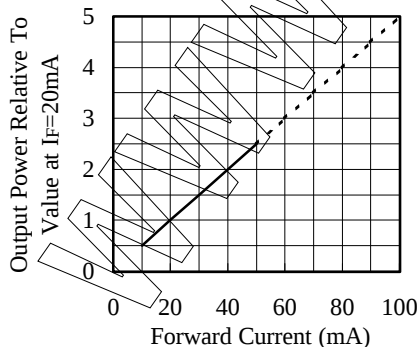


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

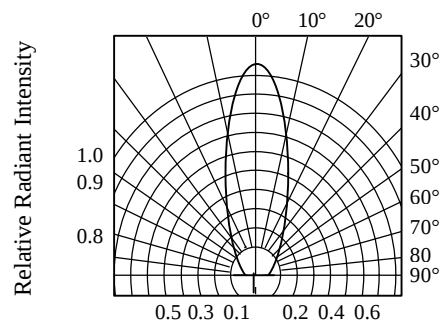


FIG.5 RADIATION DIAGRAM