

MIE-534A4

The MIE-534A4 is an infrared emitting diode utilizing GaAs with AlGaAs window coating chip technology. It is molded in water clear plastic package.

- High radiant power and high radiant intensity
- Suitable for DC and high pulse current operation
- Standard T-1 3/4 (ϕ 5mm) package, radiant angle : 30°
- Peak wavelength $\lambda_p = 940$ nm
- Good spectral matching to si-photodetector

Technical drawing of a mechanical part, likely a valve or plug, showing dimensions and section lines. The part has a cylindrical body with a hemispherical top and two vertical stems. Dimensions include a top diameter of 5.05 (.199), a top height of 7.62 (.300), a stem diameter of 0.50 TYP (.020), a stem length of 23.40 MIN (.921), and a base diameter of 2.54 NOM (.100). Section lines A-A and C-C are indicated.

Dimensions:

- Top Diameter: $\phi 5.05$ (.199)
- Top Height: 7.62 (.300)
- Stem Diameter: $\square 0.50$ TYP (.020)
- Stem Length: 23.40 MIN. (.921)
- Base Diameter: 2.54 NOM (.100)

Section Lines: A-A, C-C

Notes:

- SEE NOTE 2
- SEE NOTE 3

Diagram of a flat cathode. The cathode is represented by a circle with a dashed outline. Two small squares are positioned inside the circle, representing the anodes. The horizontal distance between the centers of the two anodes is labeled as 5.47 (.215). The vertical distance from the top edge of the cathode to the center of the anodes is labeled as 5.90 (.230). A label 'FLAT DENOTES CATHODE' points to the dashed circle.

- Notes :
1. Tolerance is ± 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.

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

Parameter	Maximum Rating	Unit
Power Dissipation	120	mW
Peak Forward Current(300pps,10μs pulse)	1	A
Continuos 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	

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	3.5		mW/sr
Forward Voltage	$I_F=50\text{mA}$	V_F		1.30	1.5	V
Reverse Current	$V_R=5\text{V}$	I_R			100	μA
Peak Wavelength	$I_F=20\text{mA}$	λ		940		nm
Spectral Bandwidth	$I_F=20\text{mA}$	$\Delta\lambda$		50		nm
View Angle	$I_F=20\text{mA}$	$2\theta_{1/2}$		30		deg .

Typical Optical-Electrical Characteristic Curves

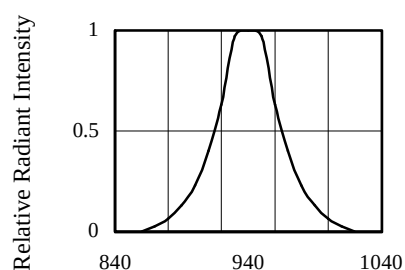


FIG.1 SPECTRAL DISTRIBUTION

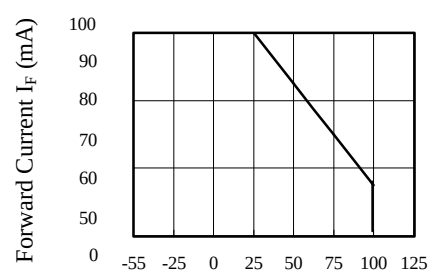


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

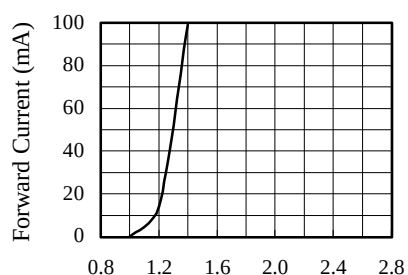


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

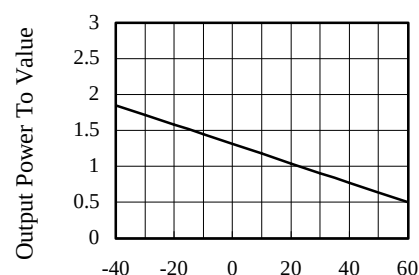


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

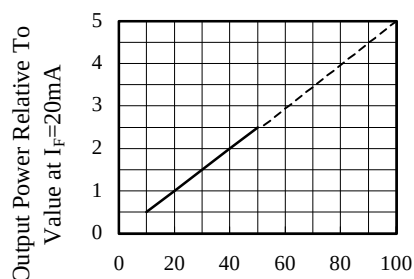


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

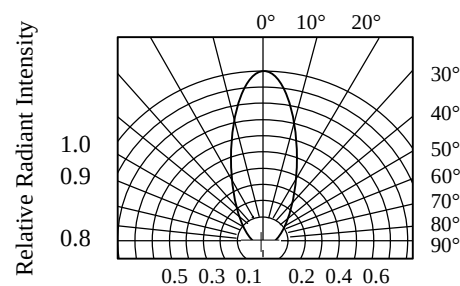


FIG.6 RADIATION DIAGRAM