

GaAlAs 1.8mm PACKAGE INFRARED EMITTING DIODE

MIE-184H4

Description

The MIE-184H4K is a GaAlAs infrared LED having a peak wavelength at 850nm. It features ultra-high power, high response speed and molded package with higher radiant intensity. In addition to improving the S/N ratio in applied optical systems, the MIE-184H4K has greatly improved long-distance characteristics as well as significantly increased its range of applicability.

Features

- Ultra-High radiant intensity
- High response speed
- Special 1.8mm package, radiant angle : 35°
- Peak wavelength $\lambda_p = 850 \text{ nm}$

Application

- Data communication
- SIR

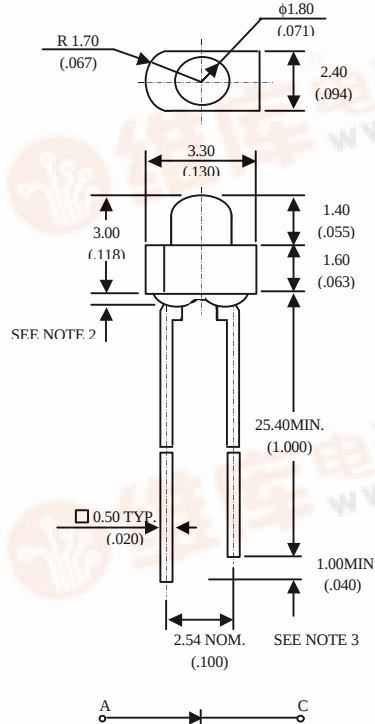
Absolute Maximum Ratings

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

Parameter	Maximum Rating	Unit
Power Dissipation	100	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°C	
Storage Temperature Range	-55°C to +100°C	
Lead Soldering Temperature	260°C for 5 seconds	

Package Dimensions

Unit : mm (inches)



Notes :

1. Tolerance is $\pm 0.25 \text{ mm}$ (.010") unless otherwise noted.
2. Protruded resin under flange is 0.4 mm (.015") max.
3. Lead spacing is measured where the leads emerge from the package.

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		2.5		mW/sr
Forward Voltage	$I_F=50\text{mA}$	V_F		1.5	1.8	V
Reverse Current	$V_R=5\text{V}$	I_R			10	μA
Peak Wavelength	$I_F=20\text{mA}$	λ		850		nm
Spectral Bandwidth	$I_F=20\text{mA}$	$\Delta\lambda$		30		nm
View Angle	$I_F=20\text{mA}$	$2\theta_{1/2}$		35		deg .
Rise Time	$I_F=50\text{mA}$	T_r		20		nsec
Fall Time	$I_F=50\text{mA}$	T_f		30		nsec

Typical Optical-Electrical Characteristic Curves

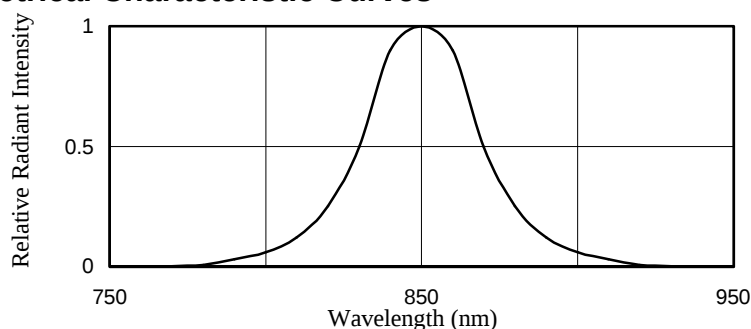


FIG.1 SPECTRAL DISTRIBUTION

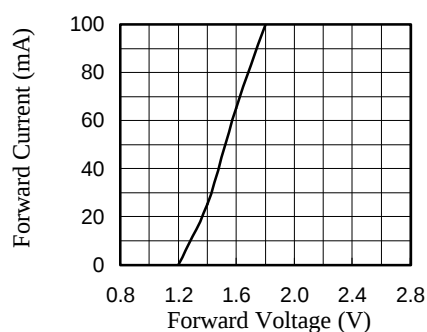


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

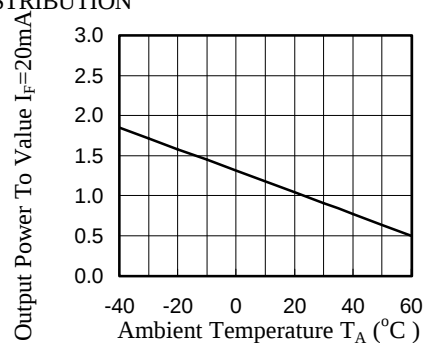


FIG.3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

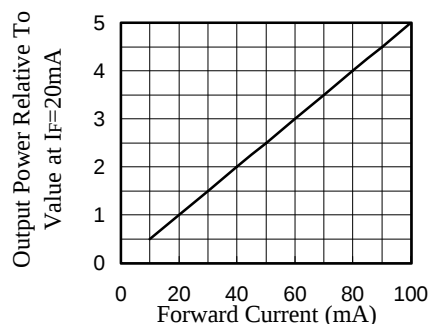


FIG.4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

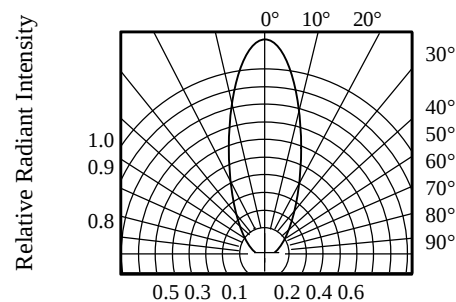


FIG.5 RADIATION DIAGRAM