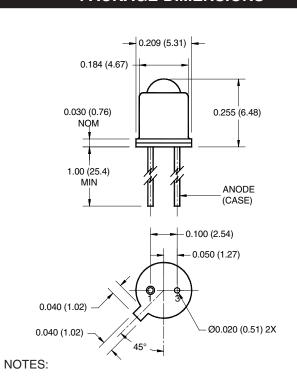
### GaAs INFRARED EMITTING DIODE

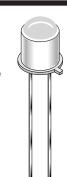
### PACKAGE DIMENSIONS



- 1. Dimensions for all drawings are in inches (mm).
- 2. Tolerance of  $\pm$  .010 (.25) on all non-nominal dimensions unless otherwise specified.

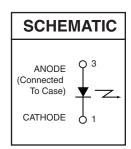
### **FEATURES**

- · Good optical to mechanical alignment
- Mechanically and wavelength matched to the TO-18 series phototransistor
- · Hermetically sealed package
- High irradiance level
- (\*) Indicates JEDEC registered values



### **DESCRIPTION**

 The 1N6264 is a 940 nm LED in a narrow angle, TO-46 package.



- 1. Derate power dissipation linearly 1.70 mW/°C above 25°C ambient.
- 2. Derate power dissipation linearly 13.0 mW/°C above 25°C case.
- 3. RMA flux is recommended.
- 4. Methanol or isopropyl alcohols are recommended as cleaning agents.
- 5. Soldering iron tip 1/16" (1.6mm) minimum from housing.

1.3

- 6. As long as leads are not under any stress or spring tension
- 7. Total power output,  $P_O$ , is the total power radiated by the device into a solid angle of 2  $\pi$  steradians.

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25°C unless otherwise specified)								
Parameter	Symbol	Rating	Unit					
* Operating Temperature	T <sub>OPR</sub>	-65 to +125	°C					
* Storage Temperature	T <sub>STG</sub>	-65 to +150	°C					
* Soldering Temperature (Iron)(3,4,5 and 6)	T <sub>SOL-I</sub>	240 for 5 sec	°C					
* Soldering Temperature (Flow)(3,4 and 6)	T <sub>SOL-F</sub>	260 for 10 sec	°C					
* Continuous Forward Current	I <sub>F</sub>	100	mA					
* Forward Current (pw, 1µs; 200Hz)	I <sub>F</sub>	10	A					
* Reverse Voltage	V <sub>R</sub>	3	V					
* Power Dissipation (T <sub>A</sub> = 25°C) <sup>(1)</sup>	P <sub>D</sub>	170	mW					

 $P_D$ 

ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C) (All measurements made under pulse conditions)								
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS		
* Peak Emission Wavelength	$I_F = 100 \text{ mA}$	$\lambda_{P}$	935	_	955	nm		
Emission Angle at 1/2 Power	I <sub>F</sub> = 100 mA	θ	_	±8	_	Deg.		
* Forward Voltage	I <sub>F</sub> = 100 mA	V <sub>F1</sub>	_	_	1.7	V		
* Reverse Leakage Current	V <sub>R</sub> = 3 V	I <sub>R</sub>	_	_	10	μA		
* Total Power	I <sub>F</sub> = 100 mA	Po	6	_	_	mW		
Rise Time 0-90% of output		t <sub>r</sub>	_	1.0	_	μs		
Fall Time 100-10% of output		$t_f$	_	1.0	_	μs		

Power Dissipation  $(T_C = 25^{\circ}C)^{(2)}$ 

W



# 1N6264 GaAs INFRARED EMITTING DIODE

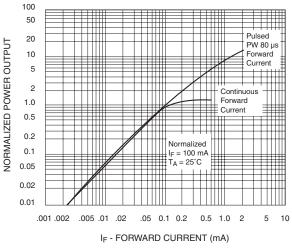


Fig. 1 Power Output vs. Input Current

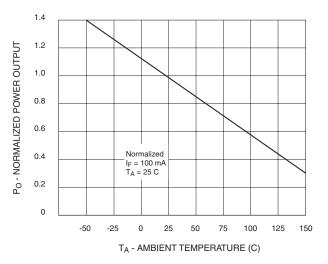


Fig. 2 Power Output vs. Temperature

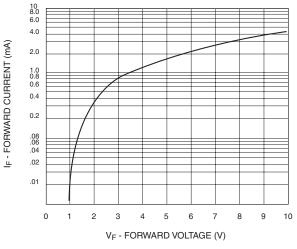


Fig. 3 Forward Voltage vs. Forward Current

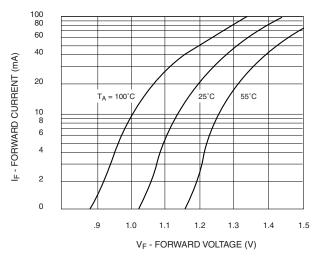
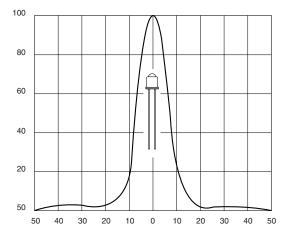


Fig. 4 Forward Voltage vs. Forward Current



 $\boldsymbol{\Theta}$  - ANGULAR DISPLACEMENT FROM OPTICAL AXIS - DEGREES

Fig. 5 Typical Radiation Pattern



## 1N6264 GaAs INFRARED EMITTING DIODE

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