



TIES27 Gallium Arsenide Infrared-Emitting Diodes

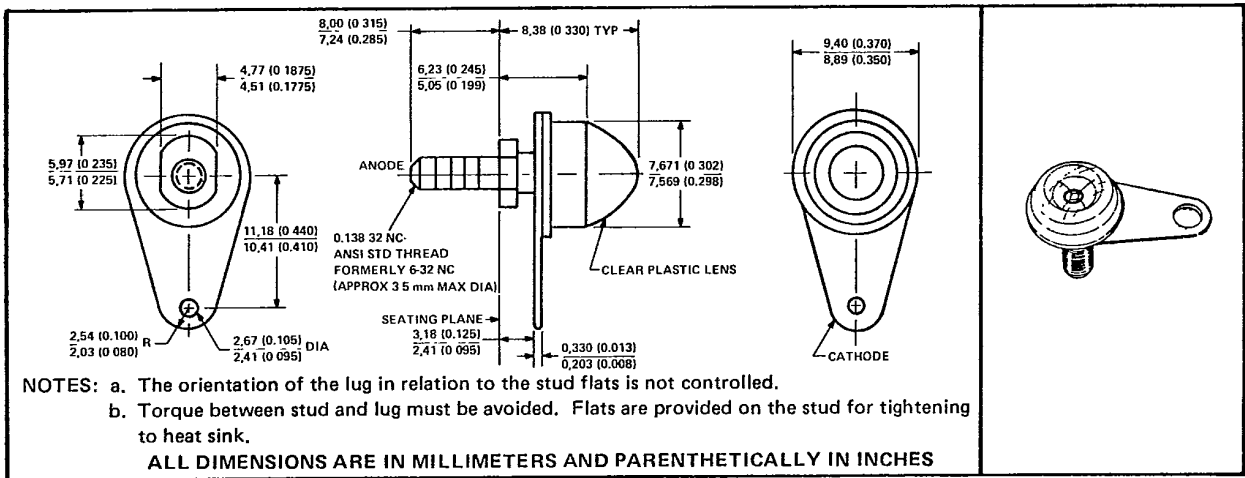
DESIGNED TO EMIT NEAR-INFRARED RADIANT ENERGY WHEN FORWARD BIASED

T-41-11

- High Output Power . . . 15 mW Min at 25°C
- Spectrally Matched to Silicon Sensors . . . Peak Emission at 930 nm
- Stud Mounting for Convenient Heat Sinking
- Recommended for Precision Optical Alignment, Industrial Controls, and Optical Communications

mechanical data

The device is encapsulated and mounted on a stud header. The cathode is in electrical contact with the solder lug. The anode is in electrical contact with the stud, which is insulated from the case by a glass-to-metal seal. Soldered connections should not be made directly to the stud because of the low-thermal-resistance path between stud and emitting element.



absolute maximum ratings

Reverse Voltage at 25°C Stud Temperature	2 V
Continuous Forward Current at (or below) 25°C Stud Temperature (See Note 1)	300 mA
Peak Forward Current at (or below) 25°C Stud Temperature (See Note 2)	500 mA
Storage Temperature Range	0°C to 90°C
Solder Lug Temperature for 10 Seconds	240°C

operating characteristics at 25°C stud temperature

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
P _O	Radiant Power Output	I _F = 300 mA	15	20		mW
λ _p	Wavelength at Peak Emission		930			nm
Δλ	Spectral Bandwidth		45			nm
θ _{HI}	Half-Intensity Beam Angle		130°			
V _F	Static Forward Voltage		1.7	2.2		V
t _r	Radiant Pulse Rise Time	I _{FM} = 100 mA, t _w ≥ 5 μs		600		ns
t _f	Radiant Pulse Fall Time			450		

NOTES: 1. Derate linearly to 70°C stud temperature at the rate of 6.7 mA/°C.
2. This value applies for t_w ≤ 100 μs, duty cycle ≤ 50%. Derate linearly to 70°C stud temperature at the rate of 11.1 mA/°C