

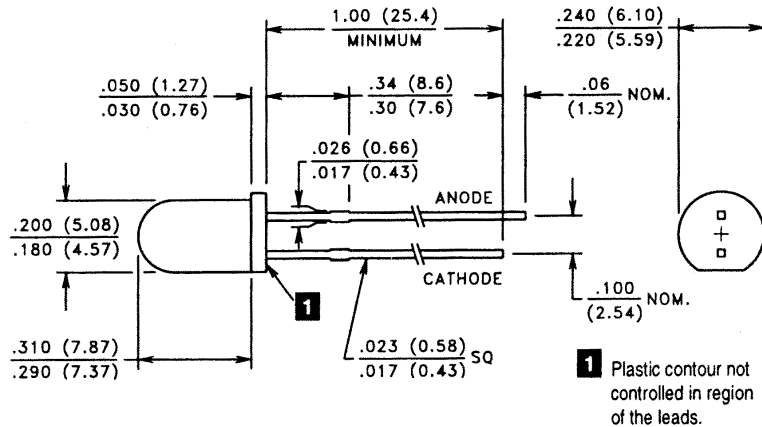
# GaAlAs Infrared Emitting Diodes

T-1 $\frac{3}{4}$  (5 mm) Plastic Package — 880 nm

# VTE1291-1, 1291-2



## PACKAGE DIMENSIONS inch (mm)



CASE 26 T-1 $\frac{3}{4}$  (5 mm)  
CHIP SIZE: .015" x .015"

## DESCRIPTION

This narrow beam angle 5 mm plastic packaged emitter contains a double wirebonded, GaAlAs, 880 nm IRED chip. This cost effective design is well suited for dc or high current pulse applications. This device is a UL recognized component for smoke alarm applications (UL file #S3506).

## ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted) ■

Maximum Temperatures		Maximum Reverse Voltage:	5.0V
Storage and Operating:	-40°C to 100°C	Maximum Reverse Current @ $V_R = 5V$ :	10 $\mu A$
Continuous Power Dissipation:	200 mW	Peak Wavelength (Typical):	880 nm
Derate above 30°C:	2.86 mW/°C	Junction Capacitance @ 0V, 1 MHz (Typ.):	23 pF
Maximum Continuous Current:	100 mA	Response Time @ $I_F = 20 mA$	
Derate above 30°C:	1.43 mA/°C	Rise: 1.0 $\mu s$ Fall: 1.0 $\mu s$	
Peak Forward Current, 10 $\mu s$ , 100 pps:	2.5 A	Lead Soldering Temperature:	260°C
Temp. Coefficient of Power Output (Typ.):	-8%/°C	(1.6 mm from case, 5 seconds max.)	

## ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also GaAlAs curves, pages 108-110)

Part Number ■	Output							Forward Drop		Half Power Beam Angle
	Irradiance				Radiant Intensity	Total Power	Test Current	$V_F$		
	$E_e$		Condition		$I_e$	$P_O$	$I_{FT}$	@ $I_{FT}$		$\theta_{1/2}$
	mW/cm <sup>2</sup>		distance	Diameter	mW/sr	mW	mA	Volts		Typ.
	Min.	Typ.	mm	mm	Min.	Typ.	(Pulsed)	Typ.	Max.	
VTE1291-1	2.5	3.3	36	6.4	32	20	100	1.5	2.0	$\pm 12^\circ$
VTE1291-2	5.0	6.5	36	6.4	65	25	100	1.5	2.0	$\pm 12^\circ$

■ Refer to General Product Notes, page 2.