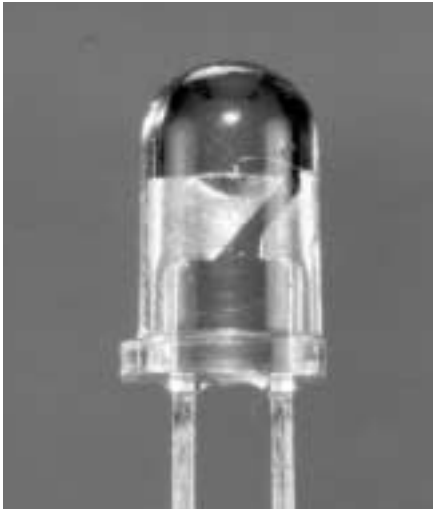


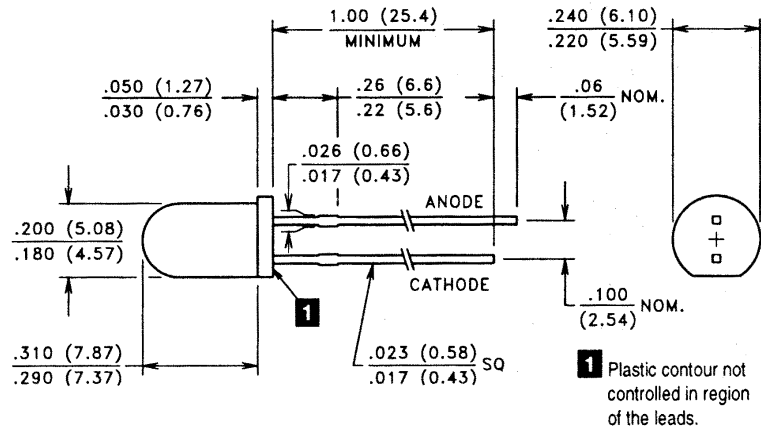
# GaAlAs Infrared Emitting Diodes

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

## VTE1291W-1, W-2



### PACKAGE DIMENSIONS inch (mm)



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

### DESCRIPTION

This wide 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			
Storage and Operating:	-40°C to 100°C	Maximum Reverse Voltage:	5.0V
Continuous Power Dissipation:	200 mW	Maximum Reverse Current @ $V_R = 5V$ :	10 $\mu A$
Derate above 30°C:	2.86 mW/°C	Peak Wavelength (Typical):	880 nm
Maximum Continuous Current:	100 mA	Junction Capacitance @ 0V, 1 MHz (Typ.):	23 pF
Derate above 30°C:	1.43 mA/°C	Response Time @ $I_F = 20$ mA	
Peak Forward Current, 10 $\mu s$ , 100 pps:	2.5 A	Rise: 1.0 $\mu s$ Fall: 1.0 $\mu s$	
Temp. Coefficient of Power Output (Typ.):	-8%/°C	Lead Soldering Temperature:	260°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 (Pulsed)	Volts		Typ.
	Min.	Typ.	mm	mm	Min.	Typ.		Typ.	Max.	
VTE1291W-1	1.2	1.6	36	6.4	16	20	100	1.5	2.0	$\pm 25^\circ$
VTE1291W-2	2.5	3.3	36	6.4	32	25	100	1.5	2.0	$\pm 25^\circ$

■ Refer to General Product Notes, page 2.