

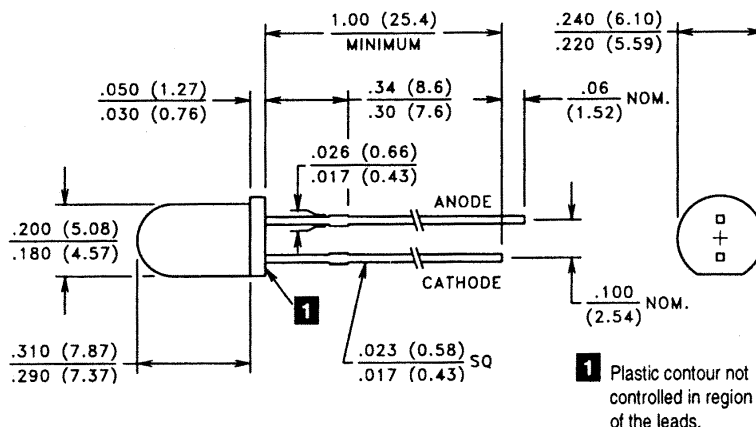
GaAlAs Infrared Emitting Diodes

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

VTE1291-1, 1291-2



PACKAGE DIMENSIONS inch (mm)



DESCRIPTION

CASE 26 T-1 $\frac{3}{4}$ (5 mm)

CHIP SIZE: .015" x .015"

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										
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 μA							
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 μs , 100 pps:	2.5 A	Rise: 1.0 μs Fall: 1.0 μs								
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}		θ _{1/2}
	mW/cm ²		distance	Diameter	mW/sr	mW	mA (Pulsed)	Volts		Typ.
	Min.	Typ.	mm	mm	Min.	Typ.		Typ.	Max.	
VTE1291-1	2.5	3.3	36	6.4	32	20	100	1.5	2.0	±12°
VTE1291-2	5.0	6.5	36	6.4	65	25	100	1.5	2.0	±12°

■ Refer to General Product Notes, page 2.