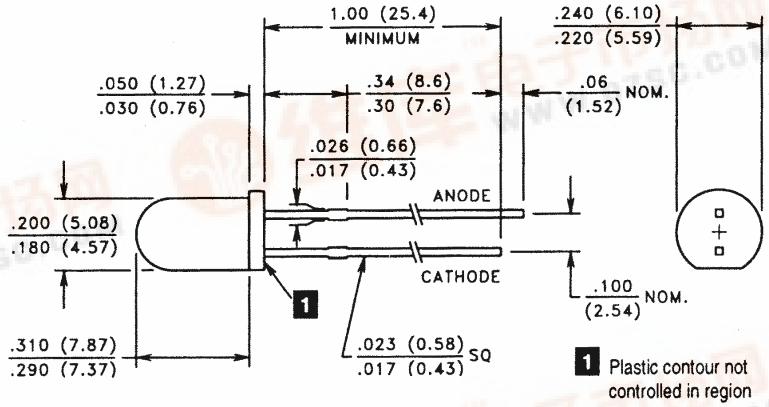
GaAlAs Infrared Emitting Diodes

T-1¾ (5 mm) Plastic Package — 880 nm

VTE1291-1, 1291-2

PACKAGE DIMENSIONS inch (mm)



CASE 26 T-1¾ (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	
Storage and Operating:	-40°C to 100°C
Continuous Power Dissipation:	200 mW
Derate above 30°C:	2.86 mW/°C
Maximum Continuous Current:	100 mA
Derate above 30°C:	1.43 mA/°C
Peak Forward Current, 10 µs, 100 pps:	2.5 A
Temp. Coefficient of Power Output (Typ.):	-.8%/°C

Maximum Reverse Voltage:	5.0V
Maximum Reverse Current @ V_R = 5V:	10 µA
Peak Wavelength (Typical):	880 nm
Junction Capacitance @ 0V, 1 MHz (Typ.):	23 pF
Response Time @ I_F = 20 mA	
Rise: 1.0 µs Fall: 1.0 µs	
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/cm²		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.