

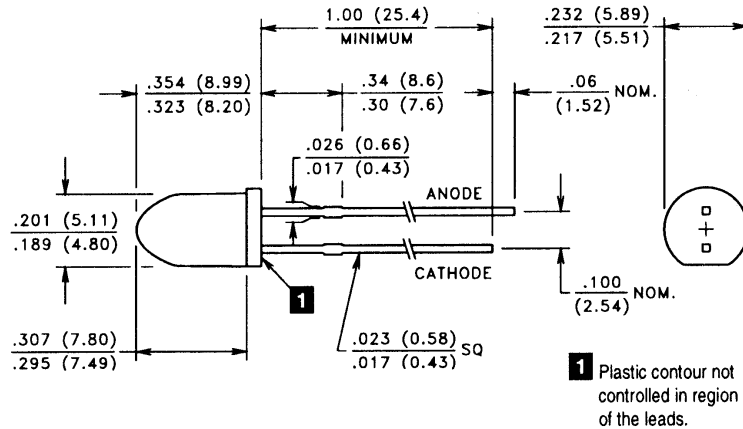
# GaAlAs Infrared Emitting Diodes

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

# VTE1295H



## PACKAGE DIMENSIONS inch (mm)



CASE 62 T-1 $\frac{3}{4}$  (5 mm) BULLET  
CHIP SIZE: .015" x .015"

## DESCRIPTION

This 5 mm diameter, custom lensed device contains a medium area, single wirebonded, GaAlAs, 880 nm high efficiency IRED chip. The custom lens allows this cost effective device to have a very narrow half power beam emission of  $\pm 8^\circ$ . This device is a UL recognized component for smoke alarm applications (UL file #S3506).

## RoHS Compliant



## 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<br>■ | 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        |                |                       |               |
|                  | Min.               | Typ.      | mm                | mm          | Min.         | Typ.     | Typ.         | Max.           | Typ.                  |               |
| VTE1295H         | 3.0                | 5.5       | 36                | 6.4         | 39           | 20       | 100          | 1.5            | 2.0                   | $\pm 8^\circ$ |

■ Refer to General Product Notes, page 2.