

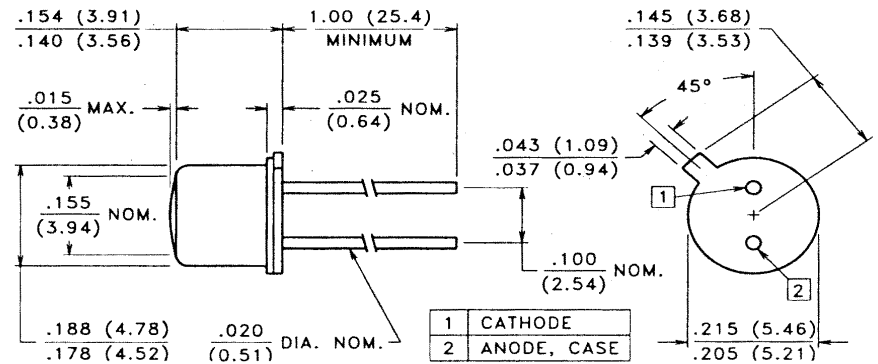
# GaAlAs Infrared Emitting Diodes

TO-46 Flat Window Package — 880 nm

# VTE1063



## PACKAGE DIMENSIONS inch (mm)



CASE 24 TO-46 HERMETIC (Flat Window)

CHIP SIZE: .018" x .018"

## DESCRIPTION

This wide beam angle TO-46 hermetic emitter contains a large area, double wirebonded, GaAlAs, 880 nm, high efficiency IRED chip suitable for higher current pulse applications.

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

|                                             |  |                |                                          |  |  |  |  |  |            |
|---------------------------------------------|--|----------------|------------------------------------------|--|--|--|--|--|------------|
| Maximum Temperatures                        |  |                |                                          |  |  |  |  |  |            |
| Storage and Operating:                      |  | -55°C to 125°C | Maximum Reverse Voltage:                 |  |  |  |  |  | 5.0V       |
| Continuous Power Dissipation:               |  | 200 mW         | Maximum Reverse Current @ $V_R = 5V$ :   |  |  |  |  |  | 10 $\mu A$ |
| Derate above 30°C:                          |  | 2.11 mW/°C     | Peak Wavelength (Typical):               |  |  |  |  |  | 880 nm     |
| Maximum Continuous Current:                 |  | 100 mA         | Junction Capacitance @ 0V, 1 MHz (Typ.): |  |  |  |  |  | 35 pF      |
| Derate above 30°C:                          |  | 1.05 mA/°C     | Response Time @ $I_F = 20$ mA            |  |  |  |  |  |            |
| Peak Forward Current, 10 $\mu s$ , 100 pps: |  | 3A             | 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<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 (Pulsed)  | Volts      |                       | Typ.           |
|                  | Min.               | Typ. | mm                | mm          | Min.         | Typ.  |              | Typ.       | Max.                  |                |
| VTE1063          | 3.8                | 5.0  | 36                | 6.4         | 49           | 80    | 1.0          | 2.8        | 3.5                   | $\pm 35^\circ$ |

■ Refer to General Product Notes, page 2.