

## Optically-Coupled Isolator

Optoelectronic Products

## 4N25, 4N26 4N27, 4N28

### General Description

The 4N25, 4N26, 4N27, and 4N28 series of opto-isolators has a silicon npn Planar phototransistor coupled to a GaAs diode. Each is mounted in a 6-pin plastic dual in-line package.

### Glassolated™

High Current Transfer Ratio—Typically 50%  
 500 V to 2500 V Minimum Isolation  
 Input-To-Output  
 $10^{11} \Omega$  Isolation Resistance  
 Low Coupling Capacitance—Typically 1.0 pF

### Absolute Maximum Ratings

#### Maximum Temperature and Humidity

|   |                |
|---|----------------|
| Storage Temperature*  | -55°C to 150°C |
| Operating Temperature   | -55°C to 100°C |
| Pin Temperature   |                |
| Soldering, 10 s*  | 260°C          |
| Total Package Power Dissipation at $T_A = 25^\circ\text{C}$ , |                |
| LED plus Detector*  | 250 mW         |
| Derate Linearly from 25°C*                                    | 3.3 mW/°C      |

#### Input Diode\*

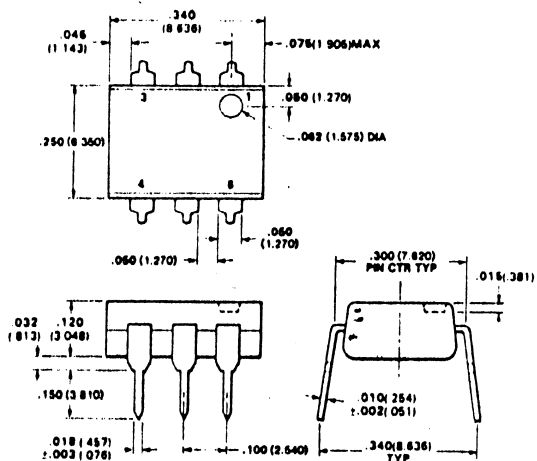
|            |   |           |
|------------|---|-----------|
| $V_R$ *    | Reverse Voltage   | 3.0 V     |
| $I_F$ *    | Forward dc Current  | 80 mA     |
| $I_{pk}$ * | Peak Forward Current,<br>1 $\mu\text{s}$ pulse width, 300 pps | 3.0 A     |
| $P_D$ *    | Power Dissipation at<br>$T_A = 25^\circ\text{C}$              | 150 mW    |
|            | Derate Linearly from 25°C                                     | 2.0 mW/°C |

#### Output Transistor

|            |  |           |
|------------|--|-----------|
| $V_{CE}$ * | Collector-to-Emitter<br>Voltage                  | 30 V      |
| $V_{CB}$ * | Collector-to-Base Voltage                        | 70 V      |
| $V_{EC}$ * | Emitter-to-Collector<br>Voltage                  | 7.0 V     |
| $P_D$ *    | Power Dissipation at<br>$T_A = 25^\circ\text{C}$ | 150 mW    |
|            | Derate Linearly from 25°C                        | 2.0 mW/°C |

\*Indicates JEDEC registered values.

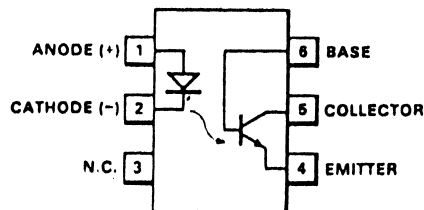
### Package Outline



### Notes

All dimensions in inches bold and millimeters (parentheses)  
 Tolerance unless specified =  $\pm .015 (\pm .381)$

### Connection Diagram DIP (Top View)



### Pin

|   |             |                              |
|---|-------------|------------------------------|
| 1 | Anode (+)   | } Input Diode                |
| 2 | Cathode (-) |                              |
| 3 | NC          |                              |
| 4 | Emitter     | } Output npn Phototransistor |
| 5 | Collector   |                              |
| 6 | Base        |                              |

