

**66286****PHOTOVOLTAIC SURFACE MOUNT OPTOCOUPLER**
**OPTOELECTRONIC PRODUCTS  
DIVISION**

02/28/2008

**Features:**

- Small size saves real estate
- Pick and place compatible
- Military temperature range
- Solderable construction and terminations

**Applications:**

- FET and IGBT drivers

**DESCRIPTION**

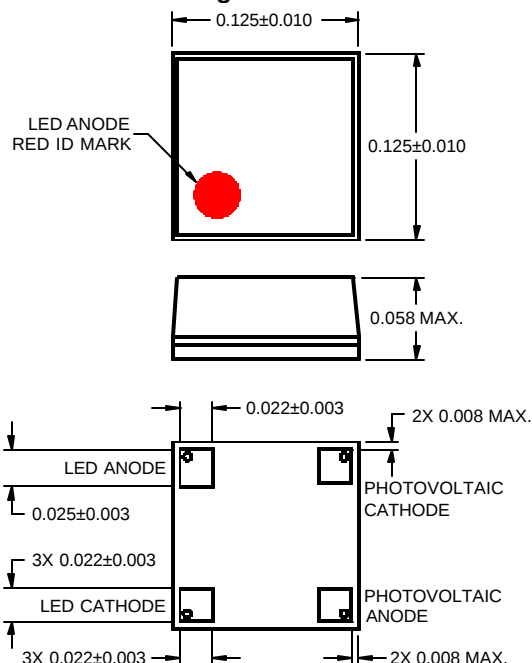
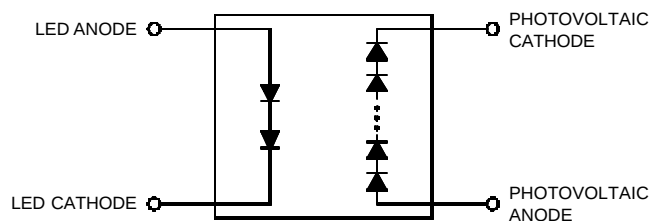
The **66286** is designed to be used with both epoxy-based surface mounting and reflow solder mounting techniques. State-of-the-art optocoupler technology is utilized. Two high efficiency infrared LEDs are coupled to a photovoltaic cell. This device is ideal for automated assembly in pick-and-place applications.

**ABSOLUTE MAXIMUM RATINGS**

|                                                                                                   |                 |
|---------------------------------------------------------------------------------------------------|-----------------|
| Input to Output Isolation Voltage .....                                                           | +1 KVDC         |
| Forward Voltage .....                                                                             | .20 V           |
| Reverse Voltage .....                                                                             | 200 V           |
| Input Diode Continuous Forward Current at (or below) 65°C Free-Air Temperature (see note 1) ..... | 50mA            |
| Storage Temperature.....                                                                          | -65°C to +150°C |
| Operating Free-Air Temperature Range.....                                                         | -55°C to +125°C |
| Lead Solder Temperature.....                                                                      | 245°C           |

**Notes:**

1. Derate linearly to 125°C free-air temperature at the rate of 0.4 mW/°C above 65°C.

**Package Dimensions****Schematic Diagram**

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**PHOTOVOLTAIC SURFACE MOUNT OPTOCOUPLER****ELECTRICAL CHARACTERISTICS** $T_A = 25^\circ\text{C}$  unless otherwise specified.

| PARAMETER                          | SYMBOL | MIN | TYP | MAX | UNITS         | TEST CONDITIONS               |
|------------------------------------|--------|-----|-----|-----|---------------|-------------------------------|
| Input diode Static Reverse Current | $I_R$  |     |     | 100 | $\mu\text{A}$ | $V_R = 2\text{ V}$            |
| Input Diode Static Reverse Voltage | $V_R$  | 3   |     |     | V             | $I_R = 10\text{ }\mu\text{A}$ |
| Input Diode Static Forward Voltage | $V_F$  | 2.2 |     | 3.0 | V             | $I_F = 10\text{ mA}$          |

**COUPLED CHARACTERISTICS** $T_A = 25^\circ\text{C}$  unless otherwise specified.

|                       |           |      |      |     |               |                                                                                                                                                                             |
|-----------------------|-----------|------|------|-----|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Open Circuit Voltage  | $V_{OC}$  | 12.0 | 14.0 |     | V             | $I_F = 10\text{ mA}$                                                                                                                                                        |
| Short Circuit Current | $I_{SC}$  | 10.0 |      |     | $\mu\text{A}$ | $I_F = 10\text{ mA}$                                                                                                                                                        |
| Turn ON Time          | $t_{ON}$  | 60   |      | 250 | $\mu\text{s}$ | $F = 1\text{ KHz}$ , $I_F = 10\text{ mA}$ ,<br>$C = 15\text{ pF}$ , $R_L = 1\text{ M}\Omega$ ,<br>Pulse Width = 1 ms<br>$t_{ON} = 0\%$ to 90%,<br>$t_{OFF} = 100\%$ to 10%, |
| Turn OFF Time         | $t_{OFF}$ | 60   |      | 250 |               |                                                                                                                                                                             |

**RECOMMENDED OPERATING CONDITIONS:**

| PARAMETER             | SYMBOL | MIN | MAX | UNITS            |
|-----------------------|--------|-----|-----|------------------|
| Input Current         | $I$    | 1   | 20  | mA               |
| Operating Temperature | $T_A$  | -55 | 125 | $^\circ\text{C}$ |