



## JIC 0.1 E8 SiC Photodetector

### CHARACTERISTICS

|                            |            |                 |
|----------------------------|------------|-----------------|
| Spectral range             | 210 to 390 | nm              |
| Active area                | 0.055      | mm <sup>2</sup> |
| High UV-responsivity       | 12         | mV/nW           |
| Externally adjustable gain |            |                 |

### APPLICATIONS

UV measurement only  
UV source control (for instance in sterilizers)  
Flame detection

### MAXIMUM RATINGS

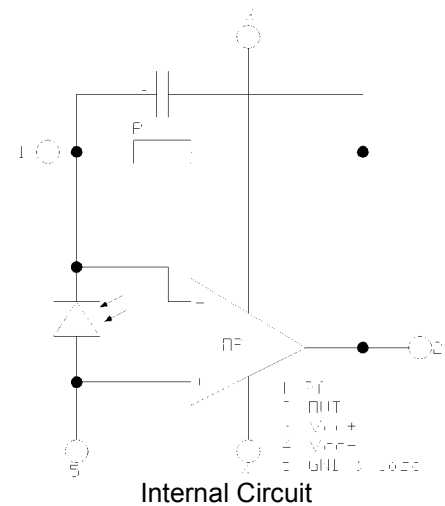
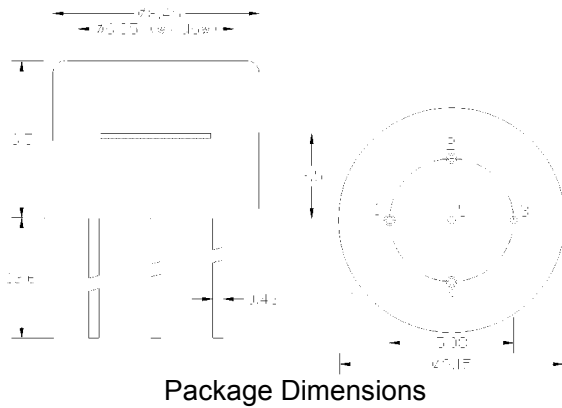
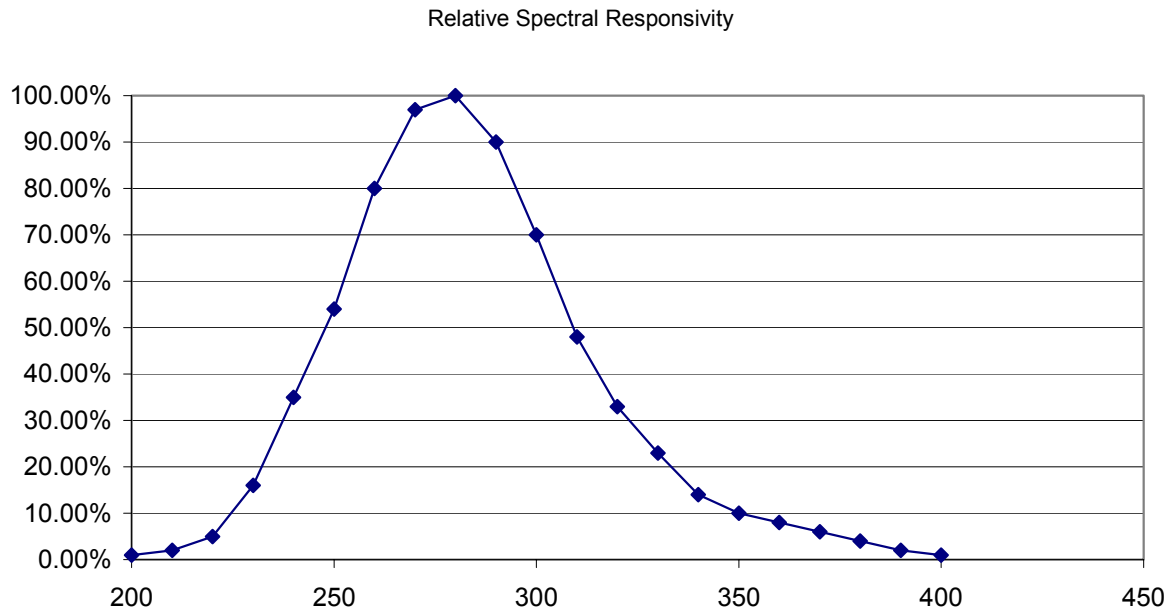
|                             |            |    |
|-----------------------------|------------|----|
| Maximum operating voltage   | +/-18      | V  |
| Power consumption           | 180        | mW |
| Operating temperature range | -25 to 70  | °C |
| Storage temperature range   | -40 to 100 | °C |
| Soldering temperature (3s)  | 260        | °C |

### TECHNICAL DATA

Common test conditions, if not otherwise specified:  $T_a = 25^{\circ}\text{C}$ ,  $V_{CC} = +5\text{V}$

| Parameter                      | Test conditions          | Min. | Typ.  | Max   | Unit              |
|--------------------------------|--------------------------|------|-------|-------|-------------------|
| Dark offset voltage            | $E = 0 \text{ lx}$       |      | +/-1  | +/-5  | mV                |
| Saturation voltage             |                          |      | +13.5 |       | V                 |
| Noise voltage                  |                          |      | 0.5   |       | mV <sub>rms</sub> |
| Absolute spectral responsivity | $\lambda = 254\text{nm}$ |      | 8     |       | mV/nW             |
| Feedback resistor              |                          |      | 100   |       | MΩ                |
| Risetime                       |                          |      | 0.5   |       | ms                |
| Bandwidth                      | -3 dB                    |      | 500   |       | Hz                |
| Operating voltage              |                          | +/-5 | +/-15 | +/-18 | V                 |
| Current Consumption            |                          |      | +/-3  |       | mA                |





#### Application Note:

- If an external resistor for reduction of response is used, make sure that the wire lengths are as small as possible to reduce noise and capacitance interference.
- If only internally adjusted gain is used, please cut pin 1.

