UV - Photodetector with integrated amplifier

JIC 167 C  
JIC 168 C  
JIC 169 C

characteristics:
- integrated UV-C filter
- spectral range: 210 ... 280 nm
- active area: 0.965 mm²
- responsivity, decadic staggering: 0.8/8/80 mV/nW
- extra sensor pin for external adjustment of gain and bandwidth
- single supply voltage
- sensor assembly isolated to ground
- hermetically welded TO5-metal/glass package
- components are in conformity with RoHS and WEEE

applications:
- selective UV-measurement
- control of sterilization lamps
- flamedetection and flamecontrol
- control of irradiancy in varnish and adhesive hardening

absolute maximum ratings:

<table>
<thead>
<tr>
<th>parameter</th>
<th>test condition</th>
<th>JIC167C</th>
<th>JIC168C</th>
<th>JIC169C</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>feedback resistor</td>
<td></td>
<td>10</td>
<td>100</td>
<td>1.000</td>
<td>MΩ</td>
</tr>
<tr>
<td>dark offset voltage</td>
<td></td>
<td>±1</td>
<td>±2</td>
<td>±3</td>
<td>mV</td>
</tr>
<tr>
<td>noise voltage</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>mVrms</td>
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<tr>
<td>max. spectral responsivity</td>
<td></td>
<td>0.6</td>
<td>6</td>
<td>60</td>
<td>mV/nW</td>
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<tr>
<td>risetime</td>
<td></td>
<td>30</td>
<td>150</td>
<td>600</td>
<td>μs</td>
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<tr>
<td>bandwidth - 3 dB</td>
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<td>10</td>
<td>2</td>
<td>0.5</td>
<td>kHz</td>
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<tr>
<td>saturation voltage</td>
<td></td>
<td>+ 4.68 (+ 4.6)</td>
<td></td>
<td>V</td>
<td></td>
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<tr>
<td>short current</td>
<td></td>
<td>±50</td>
<td></td>
<td></td>
<td>mA</td>
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<tr>
<td>supply voltage</td>
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<td>+ 2.7...+ 5</td>
<td></td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>current consumption</td>
<td></td>
<td>750 (1100)</td>
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<td>μA</td>
<td></td>
</tr>
</tbody>
</table>
relative spectral responsivity

![Relative Spectral Responsivity Graph](image)

pin configuration

![Pin Configuration Diagram](image)

package dimension

![Package Dimension Diagram](image)

**application hints:**

- If an external resistor for reduction of gain is used, please make sure that length of connectors is as short as possible to reduce noise and capacitive interference.

- If internally adjusted gain is used only, please cut pin "1".