Electron Detection 100 mm$^2$

**AXUV100G**

**FEATURES**

- Ideal for Electron Detection
- Large Detection Area
- Protective Cover Plate

**Electro-Optical Characteristics at 25 °C**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Test Conditions</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Area</td>
<td>100 mm x 100 mm</td>
<td>100</td>
<td></td>
<td></td>
<td>mm$^2$</td>
</tr>
<tr>
<td>Responsivity</td>
<td>@ 254 mm, $V_R = 0$ V</td>
<td>0.07</td>
<td>0.08</td>
<td>0.09</td>
<td>A/W</td>
</tr>
<tr>
<td>Shunt Resistance, Rsh</td>
<td>$V_B = \pm 10$ mV</td>
<td>20</td>
<td></td>
<td></td>
<td>M-ohm</td>
</tr>
<tr>
<td>Reverse Breakdown Voltage, $V_R$</td>
<td>$I_R = 1$ µA</td>
<td>5</td>
<td>10</td>
<td></td>
<td>Volts</td>
</tr>
<tr>
<td>Capacitance, C</td>
<td>$V_R = 0$ V</td>
<td>5</td>
<td>15</td>
<td></td>
<td>nF</td>
</tr>
<tr>
<td>Rise Time</td>
<td>$V_R = 0$ V, $R_L = 50$ Ω</td>
<td>10</td>
<td></td>
<td></td>
<td>usec</td>
</tr>
</tbody>
</table>

**Thermal Parameters**

<table>
<thead>
<tr>
<th>Storage and Operating Temperature Range</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient$^1$</td>
<td>-10 ° to 40 °C</td>
</tr>
<tr>
<td>Nitrogen or Vacuum</td>
<td>-20 °C to 80 °C</td>
</tr>
<tr>
<td>Lead Soldering Temperature$^2$</td>
<td>260 °C</td>
</tr>
</tbody>
</table>

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$^1$ Temperatures exceeding these parameters may create oxide growth on the active area.
Over time responsivity to low energy radiation and wavelengths below 150 nm will be compromised.

$^2$ 0.080" from case for 10 seconds.

$^3$ Shipped with temporary cover to protect the photodiode array and wire bonds.
Review the Application Note, "Handling Precautions for AXUV, SXUV, and UVG Detectors", prior to removing cover.
Typical Electron Response

Typical EUV-UV Photon Response

Typical UV-VIS-NIR Photon Responsivity
Electron Detection 100 mm²

Capacitance vs. Voltage

VOLTAGE (V)
0 5 10 15 20 25
CAPACITANCE (pF)
0 500 1000 1500 2000 2500 3000

Dark Current vs. Voltage

VOLTAGE (V)
0 1 2 3 4 5 6 7 8 9 10
DARK CURRENT (nA)
0.0 0.5 1.0 1.5 2.0 2.5 3.0
Package Information

Dimensions are in inch [metric] units.

Specifications are subject to change without prior notice.