S1722-02 and S1723-05 are high-speed Si PIN photodiodes having a large active area of φ4.1 mm (S1722-02) or 10 × 10 mm (S1723-05). Using quartz glass as the light input window, these photodiodes deliver high sensitivity extending to the far UV region and are suitable for optical power meters.

**Features**
- Quartz glass window
- High UV sensitivity
- Large active area
  - S1722-02: φ4.1 mm
  - S1723-05: 10 × 10 mm
- High-speed response
  - S1722-02: 60 MHz (VR=100 V)
  - S1723-05: 15 MHz (VR=30 V)

**Applications**
- Optical power meter
- Radiation detector

---

**General ratings / Absolute maximum ratings**

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Dimensional outline/ Window material</th>
<th>Package</th>
<th>Active area size</th>
<th>Effective active area</th>
<th>Reverse voltage Vr Max. (V)</th>
<th>Power dissipation P (mW)</th>
<th>Operating temperature Topr (°C)</th>
<th>Storage temperature Tstg (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1722-02</td>
<td>0/Q TO-8</td>
<td>φ4.1</td>
<td>13.2</td>
<td>120</td>
<td>50</td>
<td>-20 to +60</td>
<td>-55 to +80</td>
<td></td>
</tr>
<tr>
<td>S1723-05</td>
<td>2/Q Ceramic</td>
<td>10 × 10</td>
<td>100</td>
<td>50</td>
<td>100</td>
<td>-20 to +80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)**

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Spectral response range λ (nm)</th>
<th>Peak sensitivity wavelength λp (nm)</th>
<th>Photo sensitivity S (A/W)</th>
<th>Dark current Id Max. (nA)</th>
<th>Temp. coefficient of Id Tcid (times/°C)</th>
<th>Cut-off frequency fc (MHz)</th>
<th>Terminal capacitance Ct (pF)</th>
<th>NEP (W/Hz^1/2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1722-02</td>
<td>190 to 1100</td>
<td>960</td>
<td>0.5</td>
<td>0.33</td>
<td>30 ^2</td>
<td>60 ^2</td>
<td>10 ^2</td>
<td>1.1 × 10^-14 ^2</td>
</tr>
<tr>
<td>S1723-05</td>
<td>190 to 1100</td>
<td>960</td>
<td>0.5</td>
<td>0.33</td>
<td>10 ^3</td>
<td>15 ^3</td>
<td>100 ^2</td>
<td>2.3 × 10^-14 ^3</td>
</tr>
</tbody>
</table>

*1: Window material Q: Quartz glass
*2: VR=100 V
*3: VR=30 V
S1722-02, S1723-05

- **Spectral response**
- **Photo sensitivity temperature characteristic**
- **Dark current vs. reverse voltage**
- **Terminal capacitance vs. reverse voltage**

**Dimensions outlines (unit: mm)**

1. **S1722-02**
   - Window: ±13.9 ± 0.2
   - LEAD: ±2.38 ± 0.1
   - Photonsensitive surface: ±0.05
   - Index Mark: ±1.4
   - Case: ±1.0 MAX

2. **S1723-05**
   - ACTIVE AREA: 16.5 ± 0.2
   - Photonsensitive surface: ±0.5
   - ANODE TERMINAL MARK: ±1.5 ± 0.3

The glass window may extend a maximum of 0.3 mm above the upper surface of the cap.