If you need a single point detector to measure signals in the UV/Vis/NIR spectral region, the solid state silicon detector from OSD is an excellent choice. With high sensitivity (D*) and two options for ambient or thermoelectric cooling, responsivity extends from 200 nm to 1100 nm.

Used in conjunction with optically optimized housings from OSD, these detectors integrate seamlessly with HORIBA's extensive selection of monochromators. In addition, the SpectrAcq2 acquisition module allows for software integration with SynerJY, LabSpec, or LabVIEW. With all of the additional optical adapters available through OSD, a user can easily go from individual components to complete spectroscopy solutions.

A silicon photodiode from OSD provides an inexpensive option for measuring signals from the UV to near-IR!

**Features and Benefits**
- Wide spectral responsivity from 200 nm to 1000 nm
- High sensitivity (D* ~ 10\(^{14}\))
- Compact detector housing
- Inexpensive

**Accessories**
Various accessories are available for powering the detectors, optically coupling detectors to HORIBA monochromators, and data acquisition.

- Power supply for TE cooled detector, DSS-15V-TEP
- Power supply for ambient detector, DSS-15VP
- Mirror-based housing, 1427C
- BNC cable, J30646
- SpectrAcq2 data acquisition module
- SMA fiber adapter, DSS-SMA
- Dual 1427C housing adapter, J23078370
- Dual detector housing, J23079050
- BNC switchbox for dual detectors, SWB-AB
## Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>DSS-S025A</th>
<th>DSS-S025T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector type</td>
<td>2.5 mm diameter silicon photodiode</td>
<td></td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td>22°C ambient</td>
<td>-30°C TE cooled</td>
</tr>
<tr>
<td>Operating wavelength (µm)</td>
<td>200 – 1100 nm</td>
<td></td>
</tr>
<tr>
<td>Responsivity (V/W @ 850 nm)</td>
<td>0.9 x 10⁸ / 0.9 x 10⁷</td>
<td>0.6 x 10⁹ / 10⁸</td>
</tr>
<tr>
<td>Noise (V/Hz¹/²)</td>
<td>1.5 x 10⁶ / 0.3 x 10⁶</td>
<td>5.0 x 10⁶ / 1.0 x 10⁶</td>
</tr>
<tr>
<td>NEP (W/Hz⁰.⁵ @ 850 nm)</td>
<td>&lt; 1.5 x 10⁻¹⁴</td>
<td>&lt; 1.0 x 10⁻¹⁴</td>
</tr>
<tr>
<td>Detectivity (D*)</td>
<td>1.48 x 10¹⁴</td>
<td>2.22 x 10¹⁴</td>
</tr>
<tr>
<td>Bandwidth (-3dB – Hz, typical)</td>
<td>DC-500 / 2k</td>
<td></td>
</tr>
<tr>
<td>Power requirements</td>
<td>± 9 VDC to ± 15 VDC</td>
<td></td>
</tr>
<tr>
<td>Connections</td>
<td>BNC signal output. Shielded power cable terminated with a DB-9 connector directly couples the unit with the PS/TC-1 Low Noise Power Supply / Controller.</td>
<td></td>
</tr>
</tbody>
</table>

### Mechanical Dimensions

(All measurements are in inches)

![Mechanical Dimensions Diagram](image)

### Electrical Diagrams, Ambient and TE Cooled

![Electrical Diagrams](image)

### DB-9 Pin Out Diagrams, TE Cooled [Ambient]

1. Cooler (+) [No connect]
2. Cooler (-) [No connect]
3. Thermistor [No connect]
4. Thermistor [No connect]
5. No connect
6. +V
7. -V
8. GND
9. Case GND

---

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