If you need a single point detector to measure signals in the NIR spectral region, the solid state Ge detector from HORIBA Scientific is an excellent choice. With high sensitivity ($D^*\sim10^{14}$) and three options for ambient, thermoelectric, or liquid nitrogen cooling, responsivity extends from 800 nm to 1800 nm. This is one of a number of single point detectors available from HORIBA Scientific. Contact us for further information.

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 LabSpec, SynerJY or LabVIEW. With all of the additional Optical Building Blocks available from HORIBA, a user can easily go from individual components to a complete spectroscopy solution.

**Features and Benefits**

- Wide spectral responsivity from 800 nm to 1800 nm
- High sensitivity ($D^*\sim10^{14}$)
- Compact ambient and TE detector housing
- Down-looking LN2 housing

**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 and LN2 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>Detector type</th>
<th>Operating temperature (°C)</th>
<th>Operating wavelength (µm)</th>
<th>Responsivity (V/W @ peak)</th>
<th>Noise (V/Hz^{1/2})</th>
<th>NEP, pk (W/Hz^{1/2})</th>
<th>Detectivity (D^*)</th>
<th>Bandwidth (-3dB – Hz, typical)</th>
<th>Power requirements</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSS-G020A</td>
<td>2 mm diameter indium gallium arsenide photodiode</td>
<td>22°C ambient</td>
<td>0.8 – 1.8 µm</td>
<td>0.9 x 10^7 / 0.9 x 10^6</td>
<td>3.5 x 10^{-6} / 0.3 x 10^{-6}</td>
<td>&lt; 4.5 x 10^{-13}</td>
<td>3.94 x 10^{12}</td>
<td>DC – 2 kHz</td>
<td>± 9 VDC to ± 15 VDC</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>
</tr>
<tr>
<td>DSS-G020T</td>
<td>2 mm diameter indium gallium arsenide photodiode</td>
<td>-30°C TE cooled</td>
<td>0.8 – 1.8 µm</td>
<td>0.8 x 10^7 / 0.8 x 10^6</td>
<td>4.0 x 10^{-7} / 4 x 10^{-8}</td>
<td>5.0 x 10^{-14}</td>
<td>3.54 x 10^{13}</td>
<td>DC – 2 kHz</td>
<td>± 9 VDC to ± 15 VDC</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>
</tr>
<tr>
<td>DSS-G020L</td>
<td>2 mm diameter indium gallium arsenide photodiode</td>
<td>-196°C LN2 cooled</td>
<td>0.8 – 1.5 µm</td>
<td>0.8 A/W min, 0.9 A/W typ</td>
<td>0.8 x 10^{-7} / 0.8 x 10^{-6}</td>
<td>&lt; 2.5 x 10^{-15}</td>
<td>7.09 x 10^{14}</td>
<td>DC – 500 / 2000 Hz</td>
<td>± 9 VDC to ± 15 VDC</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>
</tr>
</tbody>
</table>

Mechanical Dimensions, Ambient and TE Housing

(All measurements are in inches)

Electrical Diagrams, Ambient/LN2 and TE Cooled

DB-9 Pin Out Diagrams, TE Cooled [Ambient/LN2]

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

info.sci@horiba.com  www.horiba.com/opticalbuildingblocks

Explore the future
Automotive Test Systems | Process & Environmental | Medical | Semiconductor | Scientific