If you need a single point detector to measure signals in the NIR spectral region, the solid state InGaAs detector from HORIBA Scientific is an excellent choice. With high sensitivity ($D^*$) and three options for ambient, thermoelectric, and liquid nitrogen cooling, responsivity extends from 1000 nm to 2500 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, 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 1000 nm to 2500 nm
- High sensitivity ($D^*$~10$^{-12}$)
- 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, 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-IGA(2-2)010A</th>
<th>DSS-IGA(2-2)010T</th>
<th>DSS-IGA(2-2)010L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector type</td>
<td>1 mm diameter indium gallium arsenide photodiode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td>22°C ambient</td>
<td>-30°C TE cooled</td>
<td>-196°C LN2 cooled</td>
</tr>
<tr>
<td>Operating wavelength (µm)</td>
<td>1.2 – 2.5 µm</td>
<td>1.0 – 2.3 µm</td>
<td>1.3 – 2.2 µm</td>
</tr>
<tr>
<td>Responsivity (V/W @ peak)</td>
<td>0.9 x 10⁶ / 0.9 x 10⁵</td>
<td>1.2 x 10⁶ / 10⁵</td>
<td>2.0 x 10⁶ / 2.0 x 10⁶</td>
</tr>
<tr>
<td>Noise (V/Hz¹/²)</td>
<td>4.5 x 10⁻⁶ / 0.5 x 10⁻⁶</td>
<td>5.0 x 10⁻⁷ / 10⁻⁶</td>
<td></td>
</tr>
<tr>
<td>NEP pk, (W/Hz¹/²)</td>
<td>&lt; 5.0 x 10⁻¹²</td>
<td>&lt; 5.0 x 10⁻¹³</td>
<td>&lt; 1.0 x 10⁻¹³</td>
</tr>
<tr>
<td>Detectivity (D*)</td>
<td>1.77 x 10¹¹</td>
<td>1.77 x 10¹²</td>
<td>8.86 x 10¹²</td>
</tr>
<tr>
<td>Bandwidth (-3dB – Hz, typical)</td>
<td>DC – 2 kHz</td>
<td>DC – 2 kHz</td>
<td>DC – 500 / 2500 Hz</td>
</tr>
<tr>
<td>Power requirements</td>
<td>± 9 VDC to ± 15 VDC</td>
<td></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>
<td></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

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USA:  +1 732 494 8660  France: +33 (0)1 69 74 72 00  Germany: +49 (0)89 4623 17 0
UK:  +44 (0)20 8204 8142  Italy: +39 2 5760 3050  Japan: +81 (0)3 6206 4721
China:  +86 (0)21 6289 6060  Brazil: +55 (0)11 5545 1500  Other:  +1 732 494 8660