

DSS-S02S

Silicon Solid State Detector

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & DEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOmetry
SPR IMAGING

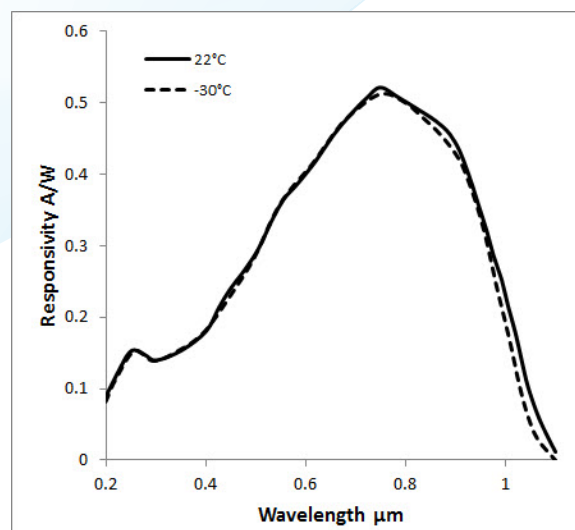
A silicon photodiode from OSD provides an inexpensive option for measuring signals from the UV to near-IR!

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 ($D^* \sim 10^{14}$) 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.

Features and Benefits

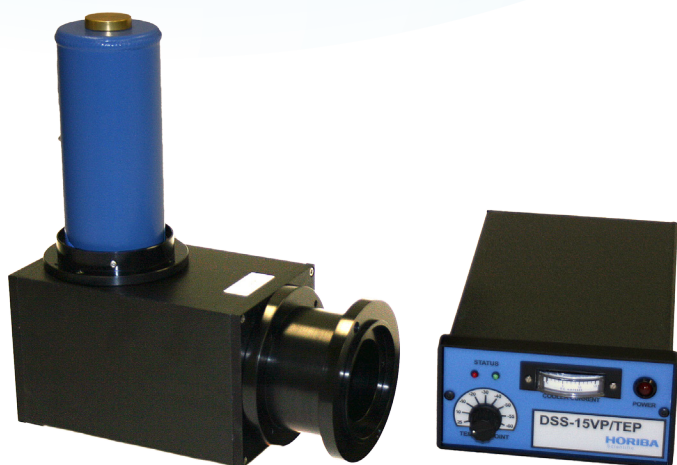
- Wide spectral responsivity from 200 nm to 1000 nm
- High sensitivity ($D^* \sim 10^{14}$)
- Compact detector housing
- Inexpensive



Accessories

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

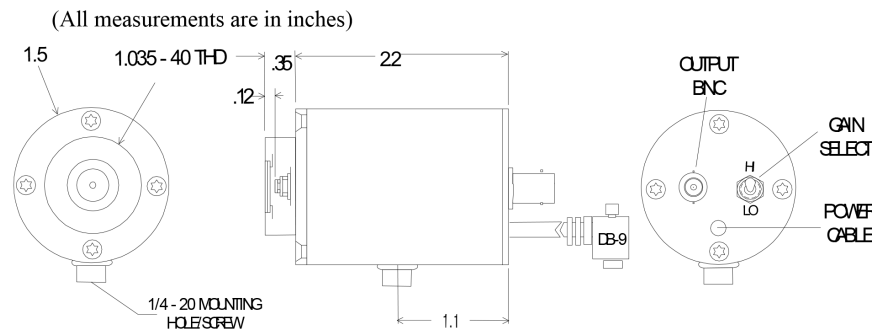
- Power supply for TE cooled detector, DSS-15V-TEP
- Power supply for ambient detector, DSS-15VP
- Mirror-based housing, 1427C
- BNC cable, J30646
- SpectrAcq2 data acquisition module
- SMA fiber adapter, DSS-SMA
- Dual 1427C housing adapter, J23078370
- Dual detector housing, J23079050
- BNC switchbox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



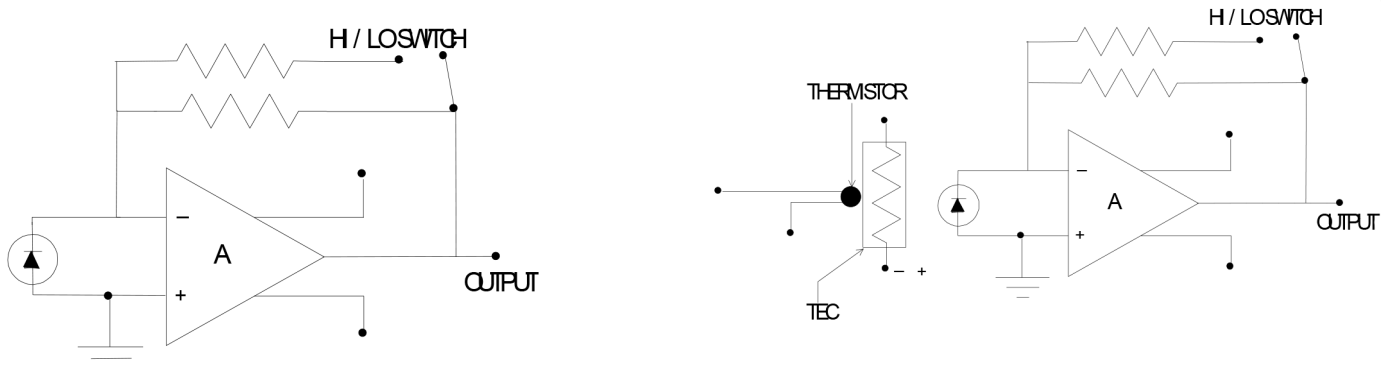
Specifications

Part number	DSS-S025A	DSS-S025T
Detector type	2.5 mm diameter silicon photodiode	
Operating temperature (°C)	22°C ambient	-30°C TE cooled
Operating wavelength (µm)	200 – 1100 nm	
Responsivity (V/W @ 850 nm)	0.9 x 10 ⁹ / 0.9 x 10 ⁷	0.6 x 10 ⁹ / 10 ⁸
Noise (V/Hz^{1/2})	1.5 x 10 ⁻⁶ / 0.3 x 10 ⁻⁶	5.0 x 10 ⁻⁶ / 1.0 x 10 ⁻⁶
NEP (W/Hz^{1/2} @ 850 nm)	< 1.5 x 10 ⁻¹⁴	< 1.0 x 10 ⁻¹⁴
Detectivity (D*)	1.48 x 10 ¹⁴	2.22 x 10 ¹⁴
Bandwidth (-3dB – Hz, typical)	DC-500 / 2k	
Power requirements	± 9 VDC to ± 15 VDC	
Connections	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.	

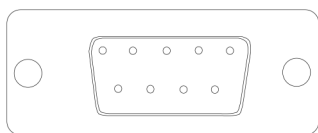
Mechanical Dimensions



Electrical Diagrams, Ambient and TE Cooled



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



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



OPTICAL BUILDING BLOCKS



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